Musical Vitalities

Ventures in a Biotic Aesthetics of Music

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The University of Chicago Press
Chicago and London

The University of Chicago Press, Chicago 60637
The University of Chicago Press, Ltd., London

Published 2018
Printed in the United States of America

27 26 25 24 23 22 21 20 19 18 1 2 3 4 5

ISBN-13: 978-0-226-59470-5 (cloth)
ISBN-13: 978-0-226-59484-2 (e-book)
DOI: https://doi.org/10.7208/chicago/9780226594842.001.0001

Library of Congress Cataloging-in-Publication Data

Names: Watkins, Holly, 1972– author.
Title: Musical vitalities : ventures in a biotic aesthetics of music / Holly Watkins.
Description: Chicago ; London : The University of Chicago Press, 2018. | Includes bibliographical references and index.
Identifiers: LCCN 2018017934 | ISBN 9780226594705 (cloth : alk. paper) | ISBN 9780226594842 (e-book)
Subjects: LCSH: Music—Philosophy and aesthetics. | Nature in music.
Classification: LCC ML3845 .W27 2018 | DDC 781.1/7—dc23
LC record available at https://lccn.loc.gov/2018017934

This paper meets the requirements of ANSI/NISO Z39.48–1992 (Permanence of Paper).

Introduction

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 conceptual 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 a 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 also projects its own sense of animation.[1] Even music that soothes and relaxes does so by entraining us to alternative metabolisms sonically realized. "We hear music as a manifestation of vitality," writes philosopher Kathleen Marie Higgins, "and part of our enjoyment is empathy with its liveliness."[2] 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 neces-

sary 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.[3] 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.[4] Music makes us feel more present and embodied, but it also carries us away. In either case, music affords 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.

This book is about 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. Roughly equal parts philosophy of music, history of aesthetics, and analytically informed criticism, *Musical Vitalities* engages with a body of thought spanning the humanities and the sciences in search of a more expansive understanding of musical form and meaning.[5] The book's interlocutors include the theory and philosophy of embodied cognition (Francisco Varela, Evan Thompson); systems theory (Gregory Bateson, Niklas Luhmann); biological and anthropological semiotics (Terrence Deacon, Eduardo Kohn); critical animal and plant studies (Donna Haraway, Michael Marder); and contemporary philosophy and aesthetics (Elizabeth Grosz, Gilles Deleuze and Félix Guattari).[6] *Musical Vitalities* also crosses paths with familiar but neglected contributions to aesthetics such as Susanne Langer's *Feeling and Form*, which considers music a peculiarly efficacious means of symbolizing vital existence. Whereas Langer's theory remains largely idealist and humanist in spirit, however, my study seeks to elucidate

how music brings its human practitioners into real and imagined contact with more-than-human vitalities.[7] By the latter, I mean aspects of existence that are experienced by humans but not limited to them, such as being subject to vibration and other physical forces, periodic motion (the breath, the heartbeat, the gait) as well as entrainment to external periodicities (the cycles of days, months, and years), and semiotic practices whose formal properties span multiple arenas of living expression. We most easily imagine sharing these experiences with our closest animal relatives, but the reach of the dynamic principles at work extends much further—to the plant kingdom and even the realm of inanimate objects.[8]

Although it has become virtually obligatory for musicologists to refrain from discussing culturally specific musical practices in terms of their naturalness or relation to the natural world, such restraint—useful though it has been in checking the universalist impulses of Western thought—has allowed a set of biases to take hold that seem to me increasingly untenable.[9] By tacitly endorsing human exceptionalism and its distinctions between human culture and the rest of what goes on in nature, the bulk of musicology today chugs along in an almost exclusively humanistic mode, ignoring developments in sister disciplines such as music cognition and biomusicology as well as more distantly related fields like ethology and biosemiotics.[10] As a result, music's structural resemblances to the songs of nonhuman species, the intricacies of music's physiological impact on the animal bodies of its listeners, and the many analogues between music's formal processes and those unfolding elsewhere in the natural world rarely come under consideration outside specialist venues devoted to animal behavior, music perception, and ecomusicology.[11] The goal of this book is neither to canvass on behalf of a particular subfield nor, conversely, to argue for the absorption of musicology into the more diffuse category of sound studies. Instead, *Musical Vitalities* seeks to counteract both the fragmentation of intellectual inquiry into isolated niches and the jettisoning of musicological tools capable of illuminating connections between human music making and the dynamic expressiveness, or expressive dynamism, of the world at large. It is precisely by preserving some of musicology's most distinctive features—namely, the formal terminology it uses to describe patterned sound and a vocabulary geared to nuances of affect and meaning—that this book finds the leverage to trouble persistent divisions between the humanities and the sciences. Add to that my occasional recourse to "gnostic" interpretation, my interest in treating human musicking as a subset of the cultural activities and "biotic arts" of other animals, and my sheer intellectual greediness, and the mixture of disciplinary voices *Musical Vitalities* rouses into conversation is nearly complete.[12]

The biotic aesthetics that flourishes in this polyvocal critical space makes possible the reappraisal of a body of literature that *did* make ample use of naturalistic imagery, often to the chagrin of later interpreters keen to expose its prejudices. Through close readings of (mostly) nineteenth-century German music and aesthetic writings that rely on a range of analogies between music and nature, *Musical Vitalities* seeks to both rekindle the intellectual potential of a literature often decried as exhausted of contemporary significance and rejoin the humans at the center of the humanities with the nonhumans who feature so frequently in their imaginations. The book's six chapters comprise a series of interpretive alloys that fuse historical discourses such as organicism, formalism, and Schopenhauer's aesthetics with insights drawn from systems theory, semiotics, and the life sciences. My points of departure are allusions to music as an art whose formal processes resemble the growth of plants, whose beauty is intimately related to natural beauty, whose sonic fluctuations open out onto larger movements of energy and will, whose vibratory and affective enchantments appeal to regions of the human body that elude conscious surveillance and control, and whose strategies of signification have much (but not everything) in common with modes of animal communication. Several of the chapters pair these allusions with music—most of it by Robert Schumann—that takes some aspect of nonhuman nature as its thematic conceit. Why Schumann? Perhaps because his music never quite lived up to the standard of humanist self-overcoming epitomized by Beethoven's heroic works.[13] And perhaps because, as I discovered in previous research, there is a certain semiotic mutability about Schumann's music that makes it amenable to conceptual reinvention.[14] The composer's oeuvre accordingly presents numerous opportunities to ponder less anthropocentric ways of construing musical vitality.

The primary concern of *Musical Vitalities* is not with what Schumann's or other composers' musical evocations of the natural world tell us about how nature was conceived in nineteenth-century Germany.[15] Although the book shares an interest in points of contact between music and the natural world with the field of ecomusicology, it does not, in contrast to much work in that field, focus its attention on depictions of or interactions with any specific environments.[16] Rather, I place the music and thought of earlier eras on a collision course with more recent philosophical and scientific thought to develop a musically inflected notion of the human that embraces the evolutionary heritage we share with other creatures and our entangled planetary fates. To this end, *Musical Vitalities* locates chinks in the Germanic tradition of musical aesthetics through which less asymmetrical relationships between

humans and nonhumans, and less dualistic modes of thinking about cultural artifacts and natural entities, can be glimpsed.

This project arose in sympathy with multidisciplinary efforts to bring humanistic inquiry in line with ways of thinking about human existence currently being explored by scholars affiliated, explicitly or not, with posthumanism.[17] Since *Musical Vitalities* continues to make use of recognizably humanistic interpretive methods, and since I am disconcerted by the increasingly cozy relationship between academic fashion and the neoliberal directive of constant innovation, I refrain from hoisting the banner of this or any other scholarly movement over the book's intellectual terrain. In any case, the book's preoccupation with historical subject matter represents a departure from how music is usually treated by posthumanist writers, who refer mainly to modern composers (John Cage is a special favorite) and popular repertories, as if only contemporary music could bear the application of contemporary thought.[18] I also differ from music scholars for whom posthumanism and new materialism primarily afford means of illuminating musical culture's technological conditions of possibility.[19] While I do not deny the importance of those conditions, nor do I wish to draw a firm boundary between human bodies and the tools they shape and by which they are shaped, my study nonetheless remains focused on instances where the self-manifesting movement of living things (*physis*) is held up as the ideal to which human making (techne or *poiēsis*) aspires.[20]

Despite these caveats, several of the book's enabling presuppositions are clearly related to those of posthumanism, especially its more ecologically oriented varieties. For example, I am curious how a more realistic picture of the interdependence of conscious thought, unconscious cognition, and what N. Katherine Hayles calls the cognitive nonconscious might alter our assessment of human endeavors, and of music in particular. Humanism, with its emphasis on the empowering faculty of reason, is preoccupied with the fruits of human consciousness, using these as the basis for an exceptionalism that places all other beings below us on the scale of value and ethical consideration. When humanists limit themselves to registers of meaning accessible solely to human consciousness, they sever their objects of inquiry from the larger physiological and ecological settings from which they emerge. Rejecting the notion that expanding the purview of the humanities beyond conscious activity threatens the possibility of critique, Hayles writes, "Consciousness alone cannot explain why scholars choose certain objects for their critique and not others, nor can it fully address the embodied and embedded resources that humanities scholars bring to bear in their rhetorical, analytical,

political, and cultural analyses of contemporary issues. Without necessarily realizing it, humanities scholars have always drawn upon the full resources of human cognitive ecologies, both within themselves and within their interlocutors."[21] Diminishing the importance granted to conscious thought in conceptions of the human not only sets the embodied nature of critical endeavors in clearer relief but also helps us conceptualize aesthetic experience itself as something much more complicated than mind-to-mind transactions between creators and receivers.[22]

Posthumanism further diversifies and complicates the human by taking into account our physiological and cultural commonalities with other creatures, the relational networks between species and environments on which our survival depends, and our own status as multispecies consortia made up of human cells and at least an equal number of bacterial cells, not to mention parasites and other hangers-on.[23] The scope of the humanities stands to be dramatically augmented once we truly confront the fact that humans do not exist in a vacuum, that humans depend on a vast ecological web of relations for their survival, that the human does not consist solely in what we think we are, and that the human genome is 99 percent similar to that of our closest primate relatives, chimpanzees and bonobos (not to mention 60 percent like that of fruit flies).[24] It is as if humanists were stuck with the unflattering slogan "we are the 1 percent." This is not to deny that there are differences between humans and other species—after all, about thirty-five million genetic variances occupy that 1 percent of difference—but to advocate for a strategic redistribution of the vocabulary of sameness and difference.[25] Pondering the similarities between humans and other creatures opens the door to greater interest in and care for nonhuman others; in addition, we could benefit from extending the discussion of difference and diversity beyond their customary humanistic confines. Human cultural and biological differences, despite being sources of perpetual political conflict, are far exceeded by the staggering biological diversity of earthly life. Although fighting social injustice often depends on increasing rather than decreasing sensitivity to human difference, it is probably also the case that a concept of humanity that is both more inclusive and less differentiated from the many other species on whom human flourishing depends will be essential in combating the potentially catastrophic effects of anthropogenic global warming.[26] As only one of about fifty-five hundred mammal species, a million animal species, and at least two million species all told—and these numbers represent only documented lifeforms—humans stand to learn a lot about diversity from the natural world. The mind-boggling variety of gender-specific behaviors and means of sexual reproduction, for instance, easily demolishes human notions of what is "natu-

ral" in these arenas.[27] At the very least, the interests of humans provide reason enough to value planetary biodiversity, since it is crucial to our long-term survival as well as a key source of existential and aesthetic wonder.[28]

To be sure, such locutions as "the natural world," as used earlier, can have troubling implications when juxtaposed with specifically human activities. Although I occasionally find it necessary in this book to distinguish human pursuits from those found elsewhere in the world, such rhetorical gambits should not be taken as suggesting that humans somehow exist apart from nature.[29] "There is but one life," writes philosopher Catherine Malabou, "one life only."[30] Malabou urges both humanists and scientists to explore the continuity between biological and symbolic manifestations of sentience, a project whose groundwork has been laid by Terrence Deacon in his extraordinary book *Incomplete Nature: How Mind Emerged from Matter*. The perspectives of these authors accord with the more general posthumanist suspicion of the boundaries Western thought has drawn between humanity and nature. For Bruno Latour, an imaginary but conceptually potent "Modern Constitution" upholds categorical distinctions between the social world of humans and the natural world of nonhumans.[31] Constructivist views of human social life that place such complex phenomena as sexuality and gender identity entirely under the control of culturally determined modes of thought only exacerbate the sense of division between humans and nature.[32] The social activities of humans, who are themselves products of natural selection, cannot be simply cordoned off from the rest of the natural world by fiat. This humanist maneuver is not only belied by the cultural transmission of behaviors among animals but also largely the conceptual product of the modern West and therefore subject to contention.[33] In addition to Latour's interrogation of Western scientific practices, ethnographic studies of non-Western societies offer a powerful means of challenging assumptions regarding the opposition between nature and culture; ethological studies (especially those of primates) are another, as are studies of the impact that microbiotic communities residing in, on, and around human bodies have on socially pertinent phenomena such as mood regulation and the onset of disease.[34] We have seen nature, and it is us.

While it can be useful to distinguish between the natural and the human-made, real conundrums arise when one tries to determine where the creativity of nature (*physis*) ends and the creativity of humans (techne or *poiēsis*) begins. Humans may intervene in *physis*, as when they selectively breed or genetically modify plants and animals, but they are not themselves the cause of growth. Yet since humans too are a product of *physis*, and, as Aristotle maintained, since techne is a naturally occurring aptitude and therefore also

related to *physis*, one cannot enforce absolute distinctions between the two kinds of creating, nor between, in James Currie's terms, artifice and the real.[35] Although humans can identify instances of *physis* in which they have taken no part, it is much harder to eliminate *physis* altogether from techne.[36] This is arguably what eighteenth- and nineteenth-century commentators were getting at when they likened the obscure workings of human creativity to unconscious, plant-like growth.[37]

If the ecological crises unfolding across the globe have lent new urgency to the project of rethinking the human, the conceptual resources for tackling this project have been around, in some form, for many decades, even centuries. Like any "-ism," posthumanism is a recrudescence of attitudes with many antecedents. The nineteenth-century philosophers Arthur Schopenhauer and Friedrich Nietzsche, for example, realized that the musings of the conscious "I" represent only a small portion of human existence, and both of them left ample room in their writings for pondering the animal- and plant-like aspects of human physiology. I will return to Schopenhauer in chapter 3; for now, I would like to spend a few moments with Nietzsche to show that radically rethinking the human does not require the imprimatur of a current scholarly trend. "The greater part of conscious thinking," Nietzsche remarks in *Beyond Good and Evil*, "must be counted amongst the instinctive functions," a statement that immediately casts doubt on conventional humanist assumptions.[38] Nietzsche continues:

> The people on their part may think that cognition is knowing all about things, but the philosopher must say to himself: "When I analyze the process that is expressed in the sentence 'I think,' I find a whole series of daring assertions, the argumentative proof of which would be difficult, perhaps impossible: for instance, that it is *I* who think, that there must necessarily be something that thinks, that thinking is an activity and operation on the part of a being who is thought of as a cause, that there is an 'ego,' and finally, that it is already determined what is to be designated by thinking—that I *know* what thinking is. . . . With regard to the superstitions of logicians, I shall never tire of emphasizing a small, terse fact, which is unwillingly recognized by these credulous minds—namely, that a thought comes when 'it' wishes, and not when 'I' wish; so that it is a *perversion* of the facts of the case to say that the subject 'I' is the condition of the predicate 'think.'"[39]

What becomes of human self-esteem when thinking or, more pointedly, rationality is viewed as inseparable from a greater psychological and physiological multiplicity that includes, for Nietzsche, "willing" and "feeling," not to mention more mundane processes such as digestion and elimination? It is not that

self-esteem evaporates altogether—Nietzsche's own glowing self-evaluation in *Ecce Homo* is proof enough of that—but that (modern, Western) humanity's self-image must be recalibrated to account for the vagaries of an organic existence profoundly affected by nutrition, climate, physical activity, and state of health, among other factors. Mental life does not simply go about its business irrespective of physiological and environmental concerns, as Nietzsche bluntly asserts in *The Genealogy of Morals*:

> When any one fails to get rid of his "pain in the soul," the cause is, speaking crudely, to be found *not* in his "soul" but more probably in his stomach . . . A strong and well-constituted man digests his experiences (deeds and misdeeds all included) just as he digests his meats, even when he has some tough morsels to swallow. If he fails to "relieve himself" of an experience, this kind of indigestion is quite as much physiological as the other indigestion—and indeed, in more ways than one, simply one of the results of the other.[40]

However hyperbolic one may find Nietzsche in his proto-Freudian moods, he does at least illustrate, with the help of a little dark humor, that one's thoughts are related to more than just one another. To put the matter in systems-theoretical terms, the psychic and digestive systems are coupled in such a way that each may perturb, though not fully determine, the other.

Elsewhere in *Beyond Good and Evil*, Nietzsche shows how the attempt to distinguish humans from nature lands one in a thicket of contradictions. He criticizes the Stoic desire to live "according to Nature" as both impossible and inevitable, a paradox that arises when the concept of nature fails to include nature's own internal antagonisms. "Imagine to yourselves," Nietzsche begins, "a being like Nature, boundlessly extravagant, boundlessly indifferent, without purpose or consideration, without pity or justice, at once fruitful and barren and uncertain—how *could* you live in accordance with such indifference?" And yet, living beings, by their very nature, struggle against these overarching tendencies: "To live—is not that just endeavoring to be otherwise than this Nature? Is not living valuing, preferring, being unjust, being limited, endeavoring to be different?" Living, in short, depends on the assertion of difference in the face of indifference, and this assertion is itself part of nature. Nietzsche continues, "Granted that your imperative, 'living according to nature,' means actually the same as 'living according to life'—how could you do *differently?* Why should you make a principle out of what you yourselves are, and must be?"[41] The upshot is that appeals to nature or the natural are not fine-grained enough to provide real ethical guidance as to how humans ought to live. We are part of nature, yet we find ourselves both sustained and

threatened by it, drawn toward and repelled by it, praising its benevolence and lamenting its heartlessness. It takes only one bacterial infection or residential infestation to strain human feelings of oneness with nature.

Nature, in short, is the arena of contest between irreconcilable values as well as cooperation toward common ends. Lawrence J. Hatab argues that Nietzsche's emphasis on values offers a refreshing alternative to scientific naturalism, which drains the natural world of meaning and value in its quest for the empirical verification and mathematical formalization of physical laws.[42] By contrast, all forms of life, in Nietzsche's view, embody a perspective on the world, and perspective implies value: what is good for the tick is not good for the animal on whom it feeds. As this by now familiar example suggests, Nietzsche's thought anticipates that of early twentieth-century biologist Jakob von Uexküll, who posited that every living creature constructs an environment (or *Umwelt*) using its own peculiar sensory and cognitive apparatus.[43] The process of construction in turn invests the world with value and meaning, and this valuation holds for all organisms, not just humans. While human language—and with it the ability to create elaborate networks of concepts, refer to things not present, and invent fictional or hypothetical realities—represents an unusual extension of the power of construction via symbolic thought, it is only one manifestation of the way all life forms construct their worlds.

Importantly, however, constructivism need not entail the belief that there is no real world—only that an untotalizable reality is selectively perceived by any species or organism.[44] In other words, no creature constructs its world in a vacuum. Although the nature that each creature experiences is different, it is still legitimate, I believe, to refer to nature as just this untotalizable reality. In this sense, I find myself allied more with what Kate Soper refers to as "nature-endorsing" thinkers rather than "nature-skeptical" ones.[45] Nietzsche, for his part, shows the absurdity to which constructivism, as a kind of extreme Kantianism, invariably leads. He maintains that "the sense-organs are *not* phenomena in the sense of idealistic philosophy," meaning that they do not belong to the realm of mere appearance. In response to those who hold "even that the external world is the work of our organs," Nietzsche replies, "But then our body, as part of this external world, would be the work of our organs! But then our organs themselves would be the work of our organs!" The only way out of this reductio ad absurdum is to conclude that "the external world is *not* the work of our organs"—a statement Nietzsche concludes with a question mark, as if to consign the whole matter to the rarefied air of idle speculation.[46]

In an introduction to a recent collection of essays, Vanessa Lemm sums

up the relevance of Nietzsche's writings for contemporary ecological and posthumanist thought: "The continuity between human life and the life of all organic and inorganic matter unsettles our anthropocentric conception of the world and shows that human culture and civilization must be understood as part and parcel of the greater order of the totality of life."[47] Viewing human culture as something like what Nietzsche called "transfigured *physis*"—a phrase that renders techne continuous with *physis* rather than separate from it—necessitates contemplating the distinctiveness of human agency against a greater background of interspecies similarity.[48] *Musical Vitalities* furthers this endeavor by exploring how analogies between musical and natural processes, which appear repeatedly in the literature on musical aesthetics, encourage us to develop modes of thinking that challenge presumed divisions between cultural artifacts and natural entities. Each chapter is a variation on this theme, and each experiments with imbuing analogies between music and nature with contemporary ecological and critical significance.

Chapter 1, "Reanimating Musical Organicism," revisits the legacy of organicism to discover fresh critical potential in a discourse currently maligned as a relic of Austro-German chauvinism. Even a casual perusal of the primary literature shows that organicism was always beset by internal tensions and unresolved issues, many of which stem from the peculiarities of the organisms that typically served as this literature's inspiration: plants. Touching on figures ranging from Immanuel Kant, Johann Wolfgang von Goethe, and Theodor Adorno to the music critics Christian Friedrich Michaelis, E. T. A. Hoffmann, and Eduard Hanslick, I show that organicist writings, many of which compared the real-time unfolding of musical works such as Beethoven's Fifth Symphony and Wagner's *Tristan und Isolde* to plant growth, continue to raise questions about the lives and identities of both organisms and artifacts as well as the relationships between these different expressions of vitality. Drawing on the social systems theory of Niklas Luhmann, whose conceptual and analytical tools deftly mediate between organic and cultural modes of organization, I offer a series of novel perspectives on the quasi-organic traits of musical form and stylistic change, which I then use to sow the seeds of a new organicism that embraces the organisms at its heart.

Chapter 2, "Formalism's Flower," elaborates on the theme of form as it appears in two key contributions to the philosophy of natural and musical beauty: Kant's *Critique of Judgment* and Hanslick's *On the Musically Beautiful*. In keeping with the current interest among environmental philosophers in remedying the nearly exclusive focus of post-Kantian aesthetics on the human arts, the chapter examines how Kant's and Hanslick's reflections on beauty highlight the formal and experiential ground shared by music and

nature, ground that neither thinker explored in detail (Hanslick, in keeping with his idealist orientation, spent far more time describing what differentiates the two). Drawing on ideas advanced in both treatises, I seek to articulate a formalism that neither locates the value of musical works exclusively in relationships between notes nor excludes historical, contextual, or personal factors from consideration. Instead, I develop conceptual strategies in which aspects of form and beauty serve to illustrate processual and dynamic features of both music and nature, strategies I employ in a discussion of arabesque and its musical analogues. As a decorative art in which the mimesis of vegetal forms and energies is crossbred with human geometrical precision, arabesque points the way toward a naturalistic music criticism that nonetheless remains focused on the peculiarities of its chosen art, as I show in an analysis of Robert Schumann's *Arabeske*, op. 18 (1839) for solo piano.

Chapter 3, "Schopenhauer's Musical Ecology," takes its inspiration from the philosopher's famous comparison of the registers of polyphonic musical textures (soprano, alto, tenor, and bass) to the "grades" of earthly existence. Moving from the high notes of the melody down to the deep tones of the bass was comparable, Schopenhauer thought, to traversing human, animal, vegetal, and inorganic domains. Despite his reputation as a metaphysician, Schopenhauer helps us think across and beyond conventional distinctions between humans and nonhumans (including, in the context of this chapter, nonliving matter). Schopenhauer's recognition of the relatedness of all beings and the presence of mineral, vegetal, and animal grades of will in human bodies makes his philosophy well worth revisiting at a time of burgeoning interest in vital materialism and the "nonhuman turn."[49] By reading Schopenhauer's aesthetics against the metaphysical grain, so to speak, I demonstrate that his remarks on music clearly delineate the art's physical impact, even as he locates musical expression in a region beyond that of any particular body. Furthermore, I show that combining Schopenhauer's ecological conception of music with his multilayered notion of the body generates a surprisingly pluralistic account of musical experience, one whose scope includes material, organic, and psychic facets of existence. The chapter closes by reflecting on the by turns promising and problematic nature of Schopenhauerian transcendence in an era marked by global warming.

Chapter 4, "The Floral Poetics of Schumann's *Blumenstück*, op. 19," follows a somewhat different path than the other chapters of the book. Instead of staging an encounter between, say, complementary strains of Romantic and posthumanist thought, the chapter focuses on how flowers, those supreme representatives of nonhuman beauty, were woven into nineteenth-century conceptualizations of gender, art, and transcendence. Thanks in part

to Schumann's own disparaging remarks, *Blumenstück* (1839), a short piano piece similar to the *Arabeske*, has been viewed as a fairly straightforward effort to appeal to amateur consumers—especially female consumers—of domestic piano music. The piece's mixed aesthetic status is closely linked to the similarly ambivalent standing of flowers (and the genre of flower painting to which Schumann's title alludes) in early nineteenth-century Germany. Yet although flowers were normally thought to be emblematic of women and the conventionalized expression of sentiment, they also constituted a remarkably evocative symbol in Romantic literature. Sentimental (or *Biedermeier*) and Romantic discourses of the flower converged in the trope of *Blumensprache* (the language of flowers), a signifying practice developed in popular manuals cataloging the meanings of flowers and referenced in the more esoteric settings of Schumann's criticism, Hoffmann's tales, and Heinrich Heine's poetry. In each of these venues, flowers served as nonhuman conduits for imaginary travel between mundane and transcendent realms. Drawing on the work of Friedrich Kittler, I elaborate on related dualities in Schumann's *Blumenstück*. With its conflicting imperatives of pleasure and instruction, congenial melody and motivic intertwining, the piece conflates aesthetic categories in a manner that undermines traditional notions of both organicism and generic classification.

Chapter 5, "Music between Reaction and Response," evaluates music's capacity to thwart conceptions of the human based on the sovereign power of rationality from a range of philosophical, critical, and scientific standpoints. Music's problematic blurring of the boundaries separating human from nonhuman bodies has long been recognized, as two Greek myths attest: Orpheus made music that inspired humanlike attention in animals, trees, and stones, while the Sirens reduced passing sailors to the level of animals incapable of resisting their song. Recast in terms employed by Jacques Lacan and criticized by Jacques Derrida, these myths portray music as calling forth a response in creatures thought merely able to react and, contrariwise, stripping away the capacity for response in humans, leaving nothing but reaction in its place. While music often provokes highly refined cognitive and emotional responses, it also acts upon the body in a variety of ways, many of them involuntary—a fact that has struck music's advocates as alternately promising and disturbing. After briefly considering the debate between Lacan and Derrida, I revisit eighteenth- and nineteenth-century commentaries by the philosophers and critics Johann Georg Sulzer, Johann Gottfried Herder, and Hanslick so as to illuminate persistent anxieties over the admixture of reaction and response in musical listening—an admixture that carries with it the further threat of confusion between animal and human modes of experi-

ence. Turning to more recent studies in music perception and ethology, the chapter weaves research on the physiological reactions involved in musical responsiveness into a philosophical perspective on the expressiveness of sound that accommodates the communicative arts of both humans and animals.

Chapter 6, "On Not Letting Sounds Be Themselves," begins with a critique of the familiar modernist notion of "sounds themselves," which crops up in writings by composers ranging from John Cage to Pierre Schaeffer to John Luther Adams. Cage's 1957 essay "Experimental Music," for instance, famously enjoined composers to "set about discovering means to let sounds be themselves" rather than continuing to use sound as a means of all-too-human expression.[50] On the face of it, lending an ear to sounds themselves seems to foster a more inclusive approach to sonic experience by refusing to honor putative distinctions between human-made sounds (including music) and sounds originating from nonhumans, living or otherwise. Yet this apparent catholicity arises from a rather strange understanding of sound in nature, one in which, as John Luther Adams puts it, natural sounds are considered "direct, immediate and non-referential."[51] Rather than representing an escape from signification, however, the natural world is positively saturated with signs. Expanding on applications of Peircean semiotics by Naomi Cumming, Gary Tomlinson, and Eduardo Kohn, this chapter turns a biosemiotic lens on the multilayered semiotics of music as manifested in Schumann's "Vogel als Prophet," a movement from the piano cycle *Waldszenen*, op. 82 (1849), and in compositions by Adams and the Norwegian composer Jana Winderen.

The abundant natural imagery running through nineteenth-century European music and aesthetic discourse testifies to the considerable impact that the vitality of nonhuman others has had on products of human imagination. There may be plenty we wish to reject in the writings of Hanslick, Schopenhauer, and others, and we may be convinced that it is no longer relevant to compose music like Schumann's. Yet ideas are renewable resources, and changing circumstances breathe new life into them. What follows might be described as the philosophy of a scavenger who scrounges around the scattered remains of nineteenth-century culture for life-sustaining tidbits, or perhaps as that of an aesthetic mutualist, whose embodied (meaning physical, affective, and cognitive) experiences of music and the natural world perpetually inform, enrich, and challenge one another. In any case, it is my hope that the chapters to come create opportunities to marvel anew at music's power to evoke more-than-human modes of embodiment as well as stimulate, transform, and complicate the vitalities of those humans who fall within its compass.

6

On Not Letting Sounds Be Themselves

"It began with birds," states John Luther Adams in "Resonance of Place" (1994), an essay chronicling the development of his compositional philosophy and technique. Spanning twenty years of musical output, the essay recounts Adams's early efforts to translate, echo, or evoke bird songs—"those marvelous languages which we do not speak and which we may never fully understand"—and other features of the Alaskan wilderness in his music.[1] Adams shows how in the interval between the instrumental miniatures *songbirdsongs* (1974–79) and the multimovement epic *Earth and the Great Weather* (1993), he gradually supplanted the imitation of nature with what he calls "sonic geography," with music that "*is* landscape," music that "conveys its own inherent sense of place."[2] As a corollary to this project, Adams argues that "attentive listening to wild sounds" can "expand our understanding of musical meaning."[3] Adams's statement inverts the more frequently encountered claim that the aesthetic sensibility listeners bring to music can enrich their appreciation of environmental sounds, whether natural or human-made. In the same essay, for example, Adams praises John Cage and other compositional forebears for encouraging listeners to hear "the entire world of sound as music," a view that has long attracted enthusiastic proponents.[4]

In this respect, "Resonance of Place" is a typical product of that strand of modernism which seeks to erode the boundaries between art and nature, expand the sonic resources available to composers, and heighten attention to the sensuous qualities of sounds.[5] Since John Cage's *4′33″*, listening to environmental sounds and listening to music have ceased, at least for those whose taste runs to panaestheticism, to be fundamentally different endeavors. Yet Adams's essay also insists on distinguishing rather than conflating the sounds of nature and the sounds of music. While music has traditionally been under-

stood in terms of its expressive meanings, Adams contends, "Sounds as they occur in the world 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."[6] Adams's language evokes that of Cage in the essay "Experimental Music" (1957), 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."[7] By basing sonic geography 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."[8] The upshot seems to be that aural encounters with the natural world help listeners refine their capacity for "direct" or "immediate" apprehension of sound. Composers, in turn, can find inspiration in nature to create music that is concerned not so much with expression as with pure acoustic qualities.

But something about this argument does not satisfy. Aside from the confusion in "Resonance of Place" about whether natural sounds are to be heard "as music" or "just as they are"—or are these options somehow equivalent?—one might question whether the modernist concept of immediate sound, or, more poetically, of letting sounds be themselves, really brings contemporary music closer to the "wild sounds" of nature. What semiotic principles, musical or otherwise, would justify such a claim? Benjamin Piekut observes that for the Cage of "Experimental Music," "nature is figured at its most traditionally modernist—that is, as raw sound."[9] This association, Piekut explains, derives from a modern Western understanding of the world, memorably diagnosed by Bruno Latour, that separates nature and humanity into two opposing camps and reserves practices of meaning making for humans.[10] Determined to burst the traditional confines of those practices, Cage accorded nature the role of austerely indifferent legislator (or, less generously, scapegoat) of aesthetic experimentation.

As Piekut's analysis implies, the idea that nature is the domain of direct, immediate, or raw sound is of relatively recent vintage, a fact that raises questions about the aesthetic outcomes of attempts to compose with sounds that "simply sound." Do musical works composed in accordance with a view of nature as semiotic blank slate succeeding in being more "natural" than the varieties of nature-themed music predating modernism—music like, say, Robert Schumann's 1849 piano cycle *Waldszenen* (*Scenes of the Forest*), op. 82? Schumann's cycle is generally considered to belong on the popular, or *Biedermeier*, end of the Romantic musical spectrum, which is to say that it is in no way protomodernist. Its nine accessible movements imagine the forest as a space of both human and nonhuman habitation rather than as a pure

sylvan wilderness. Does this mean that *Waldszenen*'s musical poetics stand at a further remove from "nature's manner of operation" than those of Adams or Cage?

This chapter approaches the question not by staging a contest between Schumann's music and that of later composers but by considering how the semiotics of "sounds themselves" departs from both familiar conceptions of music and contemporary perspectives on nonhuman semiosis. To that end, I place Adams's and Cage's polemics, as well as several commentaries on composing with natural soundscapes, in dialogue with recent ventures in Peircean semiotics by Gary Tomlinson and Eduardo Kohn.[11] Tomlinson has done more than any other musicologist to bring biosemiotics into the discipline's orbit, and, although the pages that follow take issue with several of his arguments, his work nonetheless illuminates enigmas of signification, musical and otherwise, that few others have confronted. This chapter elaborates on those enigmas as they play out in contemporary "sonic geographies" by Adams and the Norwegian composer Jana Winderen as well as the movement "Vogel als Prophet" ("Bird as Prophet") from Schumann's *Waldszenen*. I argue that viewing the natural world as the rightful home of sounds themselves—of essentially meaningless sounds fundamentally different from the meaning-laden sounds of humans—works against the desire, so often expressed by advocates of such views, to close the distance between human music making and nonhuman sound making. Reintroducing meaning into the full spectrum of semiosis, by contrast, provides an alternative means of both closing and maintaining that distance, even as it sets limits on the human ability to make such determinations.

The Sound of Signifying

Let us return to the question of how Adams thinks attentive listening to wild sounds can expand our understanding of musical meaning. In brief, the composer argues that when humans listen to sounds in nature, 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, Adams suggests, a more primordial way of being can flourish 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."[12] 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 natu-

ral 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."[13] The direction of Adams's argument in "Resonance of Place" 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." Following these precepts, Adams has sought to devise compositional strategies that combine the "symbolic strictures of musical semantics" with the irregular temporal flow of natural soundscapes. The sonic geographies that result invite what Adams calls a "non-metaphoric" style of listening.[14]

If Adams's ascription of symbolic reference to music may bring readers with more "drastic" inclinations up short, his corresponding denial of referentiality to the nonhuman sounds of nature is even more perplexing.[15] Is it really true that sounds such as "the primal music of bird songs and animal cries, the voices of wind and water"—is it really true that these do not, as he says, "represent or evoke anything other than themselves"?[16] 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 language, where words normally refer to something quite different from the sequences of sounds that comprise them. According to 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.'"[17] 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."[18] Animal sounds, as Herder recognized, 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?"[19] 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."[20] 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.'"[21] 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.[22]

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."[23] 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.[24] 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 systematic 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.[25] Even if such phenomena do not constitute full-blown symbolic systems, they do at least illustrate that animals who heard only "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.[26] 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 patterns. 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.[27] 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."[28] Although this view would seem to be modulated in Rothenberg's later study 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."[29]

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."[30] 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.[31] 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."[32] But 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 surroundings. Cage alludes to this broader semiosis when he states, in veritable Romantic fashion, that "trees, stones, water, everything is expressive."[33] Expressive of what? Of presence, of the "I am here" of everything.[34]

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 on 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.[35] A similar impulse can be witnessed in the rise of speculative realism and object-oriented ontology, both of which try to rise above 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.[36] 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.[37]

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, material, and so on. If ecology and systems theory have taught us anything, it is to be suspicious of the notion that anything exists wholly in- or for-itself. Treating things as though they do exist in this way, Bateson maintains, is a product

of the "distortion" wrought by human consciousness. 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 ecological significance.[38] To be sure, there is nothing to stop listeners from attempting the "reduced" listening prescribed by the ontology of "sounds themselves."[39] 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."[40] 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."[41] 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."[42]

Conundrums of Musical Semiosis

In an essay entitled "Parahuman Wagnerism," Gary Tomlinson argues 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 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."[43] Indices, Tomlinson maintains, are minimally referential; they lack the "aboutness" that, in his view, icons and symbols possess.[44] Since many more creatures respond to indexical signs (such as the sounds made by their own and other species) than symbolic ones, Tomlinson classes music among what he calls "informational processes of wide extrahuman dispersion."[45]

Tomlinson's thesis regarding the close connection between musicking and nonhuman semiosis is appealing, especially given music's conspicuous affective impact, its resemblance to phonocoded forms of animal communication (see chapter 5), and the "embodied and palpable" nature of its signs.[46] Indeed,

music is psychoactive in a manner that attests to the index-like 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.[47]

Tomlinson's approach to musical signification presents further difficulties. For instance, although he builds on Naomi Cumming's 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."[48] 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, while the reference of indices is "grounded in their time and place of use."[49] 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 affective and physical arousal, Cumming would understand these features as iconic—as indices once removed or virtualized but not by consequence any less effective.[50] 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."

In "Parahuman Wagnerism," Tomlinson sidesteps the virtual nature of musical indexicality by redirecting attention to the *interpretant*, which, in Peircean terms, refers to the connection an observer makes between a sign and something presumed to be its object. Wagner's music may point to "the dramatic presentation before us," Tomlinson admits, but rather than depicting aspects of the drama, the music instead invites us to construct "psychic states" in such a way that we "*make* the music at every moment."[51] Listening to Wagner, Tomlinson concludes, involves not the passive registration of

symbolic meanings but a "subjective activism" that consists of "the making of interpretants that relate indices to their objects."[52] It is precisely because musical expression does *not* depend on direct causality or physical proximity—key aspects of indexical signification—that Tomlinson must take cover under the workings of the interpretant, leaving the reader uncertain about how music actually manages to signify at all. Tomlinson's analytical vocabulary of flat II, subdominant, and V7 chords, along with the larger expressive complexes to which they belong, refers to a level of musical meaning for which he offers little explanation—the level at which musical signs function as elements of a system (in this case, a tonal system). These elements are not themselves indices in any obvious sense. A V7 chord might point to a tonic, but since that tonic need not be realized for V7 to be an effective sign, dominant chords and the like do not display the "contiguity and direct causality of the index."[53] Since he provides no other way to understand the semiotic function of these familiar musical elements, Tomlinson makes it seem as though the expressive import of music is entirely arbitrary rather than deeply enculturated and dependent on the particular musical devices in play.

The situation gets even more complicated in *A Million Years of Music*. Tomlinson's book argues that present-day musicking arose from the "systematization of ancient, indexical gesture-calls," a claim he supports through a speculative reconstruction of the emotive contours and "technosocial" rhythms of early hominin protodiscourse.[54] Yet Tomlinson also envisions an intervening period during which discrete pitches were abstracted from vocal utterances, giving rise to sonic phenomena that were "distanc[ed] . . . from meaning." He explains, "While broad pitch contours continued to convey emotive and even semantic content, the pitches underwent an absolution from signifying."[55] In this stone-age version of "sounds themselves," music becomes the province of pitches that are "barely signs of any kind."[56] For Tomlinson, these not-really-signs serve as the basis for larger expressive units, which then serve as material for an "indexical systematicity" different from the symbolic systematicity of language. But does music really systematize indices? There can be little doubt that hominin protodiscourse was largely indexical in nature, with utterances conveying anything from solace to aggression to a simple "here I am." After discrete pitches began to make their way into such utterances, however, giving rise to fixed patterns of pitches or intervals, the causality and contiguity of indexical reference no longer account for the total semiotic phenomenon. This observation applies to both human music and nonhuman song. Think of the birdsongs I discussed in the previous chapter: although any song points indexically to the bird who is singing, the flexibly varied melodic units or phrases that make up the song are unlikely to be individually indexical of

anything. Many birdsongs involve an order of formal play that exceeds the scope of indexicality, even if the robustness and intricacy of the song indicates something like reproductive fitness. Successful songs probably attract admirers because, in some sense only partially available to human ears, they sound good. Discrete pitch is the vehicle for performances that exceed mere functionality—performances in which an excess of signification, rather than abstraction per se (as Tomlinson might have it), serves as the gateway to the aesthetic dimension.[57]

Tomlinson's treatment of meaning, or what he calls "aboutness," also raises questions. While he maintains that aboutness is "all but irrelevant" in musical experience, he also suggests that it "intrudes in human experiences of the world" in a manner that "probably does not extend far beyond our species."[58] That is, we cannot help but think that music is about something, especially in a dramatic setting such as a Wagner opera. We cannot, as Tomlinson puts it, "*not* come to a weighing of a sign/object bond."[59] But what is the Peircean interpretant if not the weighing of a sign/object bond and thus an activity that takes place in all types of semiosis, indexicality included? Restricting aboutness to language-like representation obscures the referential character of other kinds of signs. Kohn writes, for example, that "indices provide information; they tell us something new *about* something not immediately present" (my emphasis).[60] Semiosis in general might be described as an activity through which living beings gather and interpret information about their worlds. The sound of a flag flapping in the wind, for instance, would routinely startle my dog because he perceived that sound as indexically linked to a potential threat in the environment. Stripping sonic information of aboutness is another relic of modern information theory, which, as Terrence Deacon observes, reduces information to physical parameters and casts aside "reference, meaning, and significance."[61] The early twentieth-century biologist Jakob von Uexküll, to whom Tomlinson's biosemiotic perspective is indebted, argued that "the question as to meaning must . . . have priority in all living beings." All life processes, for Uexküll, involve "carriers of meaning" and "meaning factors."[62] Portraying aboutness as an "intrusion" on some a priori, nonreferential semiotic state, a state which allegedly encompasses music as well as the world (or worlds) experienced by nonhumans, not only introduces an artificial division into the fluid process of listening to music but also risks reinforcing invidious distinctions between meaningless nature and meaning-making humans.

My aim here is less to criticize Tomlinson than to demonstrate that music does not submit willingly to Peircean semiotics so much as it demands the extension and refinement of that semiotics. 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.[63] 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."[64] However, 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.[65] 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.[66] 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.[67] It is in this sense that we can appreciate Adams's remark that human music is a "symbolic and semantic phenomenon in which the relationships *between* sounds mean more than the sounds themselves."[68]

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 (again, 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."[69] 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. (What is octave equivalence other than a special kind of iconicity?) Abstracting tones from indexical gesture-calls produces 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."[70]

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 different in important details from Tomlinson's, shares in his concern to cautiously differentiate 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" while 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, 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.[71] 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 sixteen-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.[72] 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 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 are 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.[73] 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."[74] 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."[75]

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.[76] The attentive listening to wild sounds that informs her music might go some way toward spurring wonder, or even humility, in the face of what does not sound for us in nature. Such an outcome, however, can hardly be guaranteed, however much it echoes familiar hopes for soundscape composition in general. Composers such as Hildegard Westerkamp and John

Levack Drever have sought to distance soundscape composition from musique concrète and acousmatic music aesthetics, both of which place value on divorcing sounds from their sources and composing only with a concern for the "sounds themselves."[77] Westerkamp defines the "essence" of soundscape composition as "the artistic, sonic transmission of meanings about place, time, environment and listening perception," while her colleague Barry Truax affirms that the meanings of environmental sounds used in soundscape compositions are "inescapably contextual."[78] Yet an important component of the meaning of such sounds—their indexical connections to something presently making the sound—is unavoidably lost in the act of recording. Nor can meanings be as easily transmitted by recorded sounds as Westerkamp implies (recall that Shannon's conception of the information contained in a signal had nothing to do with the signal's meaning). She therefore recommends that composers include additional information regarding the place, time, weather conditions, and social context of recording.[79]

Soundscape composers tend to be acutely aware of the problems attendant on their chosen métier. Westerkamp recognizes that although what the microphone affords "feels like access, like closer contact . . . it is in fact a separation, a schizophonic situation."[80] The separation of sound from source only increases when soundscape recordings are commodified and imported into completely different locales, making it difficult to maintain the "ecological thinking" that inspired those recordings in the first place.[81] The danger is that aesthetic absorption in a recorded (or virtualized) soundscape might displace interest in the environment that made it possible, "inadvertently participating," says Westerkamp, "in the place's extinction."[82] She nonetheless remains optimistic, contending that "the 'naked ear' of the microphone can arouse an attentiveness in our listening, which will have a direct influence on how we speak with environmental sounds through our compositions and productions."[83] Drever, citing Truax, is similarly convinced, and he includes among a list of what constitutes a soundscape composition the requirement that "the work enhances our understanding of the world, and its influence carries over into everyday perceptual habits."[84]

If composers are lucky enough to bring about this enhancement, it is not because they have truly overcome the separation between sound and source (and the concomitant loss of contextual, indexical meanings) characteristic of acousmatic sound. Westerkamp reveals as much when she gives credit to "the sound materials themselves" for determining the shape of a composition.[85] What those materials give rise to in the virtual space of the artwork is fundamentally different from the holistic environments to which they originally belonged. "At the point when the ear becomes disconnected from direct

contact with the soundscape and suddenly hears the way the microphone 'hears' and the headphones transmit," Westerkamp muses, "at that point the recordist wakes up to a new reality of the soundscape," a reality in which "the sounds are highlighted and the ears are alerted."[86] This is, in short, a virtual reality, one that selects a narrow band of acoustic phenomena from a semiotically multivalent and multisensory environment, captures and strips those phenomena of their in-the-moment indexicality, and transports the resulting sounds into the virtual space of the aesthetic artifact. Schizophonia breeds schizosemiosis; the direct causality of indices gives way to the contingent generation of interpretants that are, essentially, interpretive or hermeneutic. It is up to individual listeners, writes Truax, to "complete the network of meanings" initiated by the work, or, according to Westerkamp's directive, to aspire to "genuine ecological consciousness."[87]

Adams's recasting of composition as "sonic geography" might be understood as an attempt to eliminate some of the bad taste of resource extraction that clings to the technological capture and export of environmental sounds. By composing music that aspires to "be landscape" rather than represent it, Adams continues the long tradition of crafting virtual musical spaces that may or may not profess ties to actual places.[88] This project takes an especially unusual form in *Earth and the Great Weather*, a ten-movement cycle that features a string orchestra, percussion, recorded natural sounds, and spoken litanies.[89] The litanies—in English, Latin, and the indigenous languages of Iñupiaq and Gwich'in—refer to places, seasonal times, directions, and the avian and vegetal occupants of the North American Arctic. Adams has written that the references to places, rather than denoting actual locales, serve as "landmarks for the listener traveling through this country of the ear."[90]

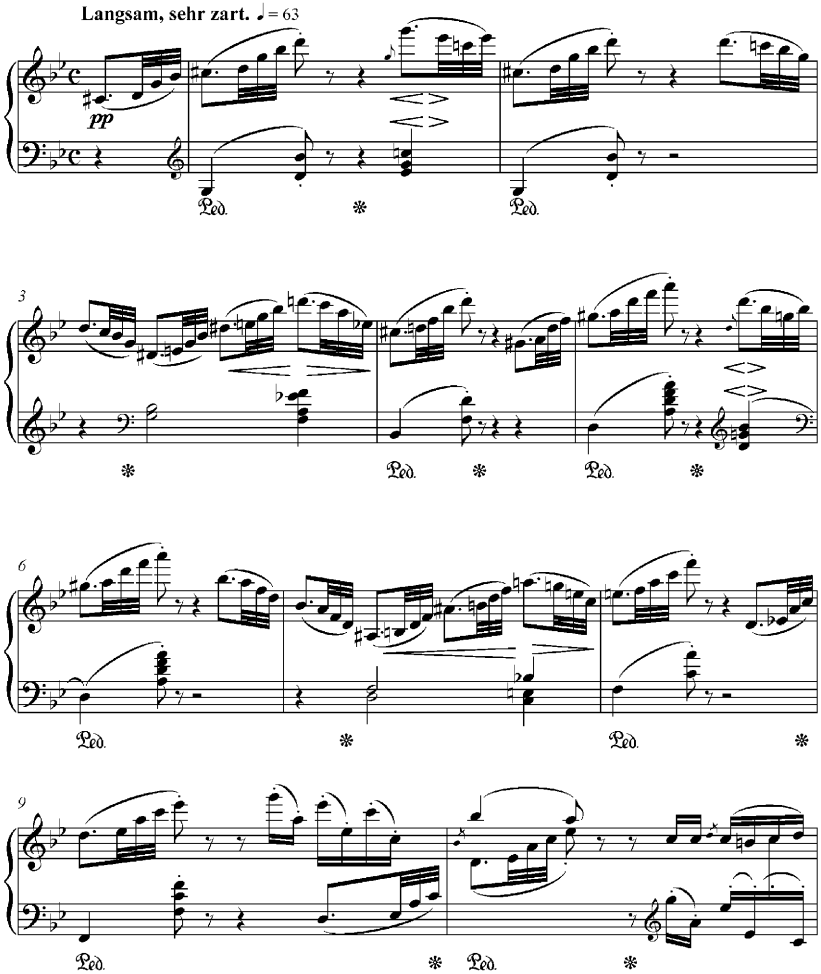
The first movement, titled (like the essay we encountered earlier) "The Place Where You Go to Listen," opens with recorded sounds of wind that coax listeners to imagine being outdoors. The speakers intone such phrases as "You can see a long way," "A point of land which juts into the ocean," "Long, high bluff," and "Place where ice is found," along with many indigenous-language terms left untranslated. Sustained tones in the strings, bowed in such a way as to generate glistening harmonics, rise up from the lower register, their upward trajectory reiterating unconscious associations between registral span and spatial extent. Staggered crescendi and decrescendi spanning the dynamic range *pp* to *ff*, along with an increasing use of tremolo, create an aural environment marked by continuous energetic flux amid relative tonal stasis. The imaginary landscape persists, though it is buffeted by constantly shifting winds.

Listening to the movement, I do not think one is meant to ponder rocky

bluffs or thickets of ice in general. Instead, the spoken litanies encourage the work of imagining not just a specific place but also the indexical relations between sounds and things that help define a place. In the essay "Winter Music," Adams writes of music as a "wilderness" one can get "lost in."[91] If being absorbed in music is analogous to being located in a place, then Adams's music aspires to be heard as a series of virtual indexes, as the sonic residue of some imaginary auditory scene. *Earth and the Great Weather* attempts the imaginary restoration of originary indexicality, as if each word and phrase of the litanies pointed to an actual thing and each instrumental or recorded sound arose from a dynamic force or creature in the environment. In other words, the piece construes aesthetic emplacement as a rehearsal for real emplacement. The rhetoric of "Resonance of Place" notwithstanding, Adams's music adheres to a philosophy of music not as the play of sounds themselves, but as a virtual reorientation toward the actual.

How *Waldszenen* Thinks

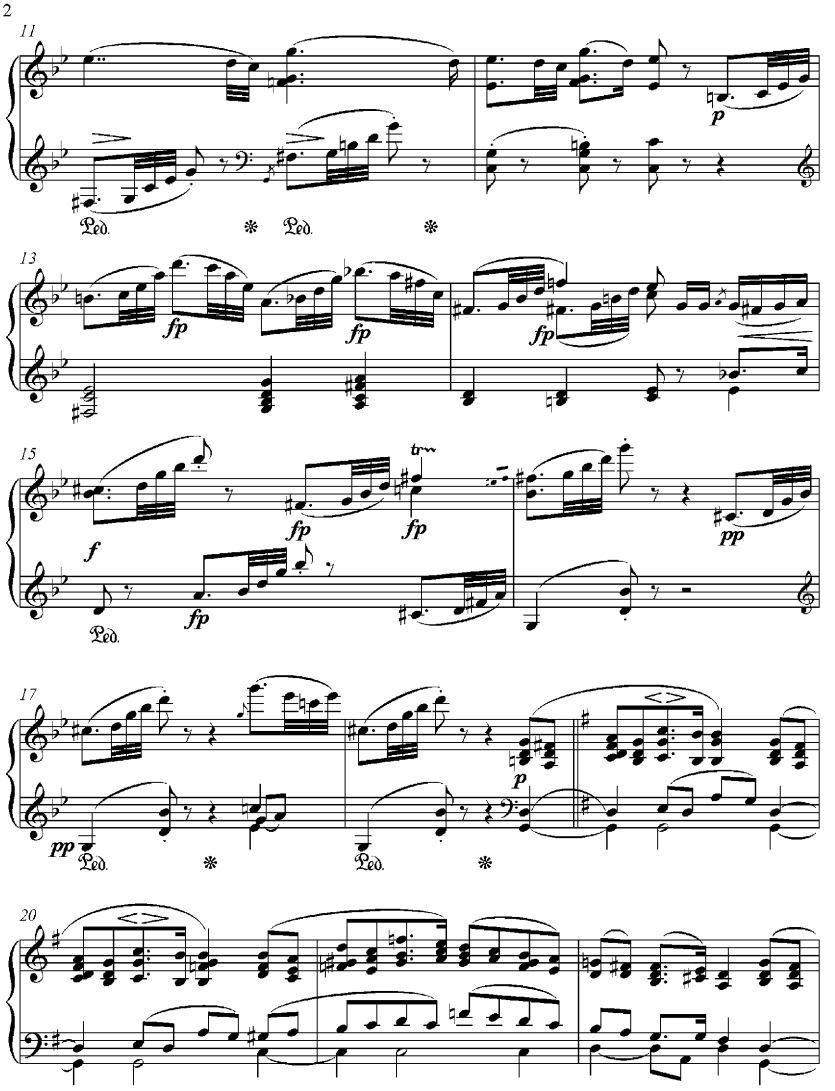
Let us return to music in which, as Adams maintains, "the relationships *between* sounds mean more than the sounds themselves." In Schumann's *Waldszenen*, we find a complex network of iconic, indexical, and symbolic relationships that creates its own possibilities for how music can "be landscape," in Adams's sense. For instance, the seventh movement, "Vogel als Prophet" ("Bird as 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 in which it summons up primordial fears, desires, and pleasures . . . only to direct them, reterritorialize them, on the plane of music itself."[92] The movement opens with a melody whose expansive tessitura, twittering thirty-second notes, and inscrutable silences suggest the song of nothing human (example 6.1). Rhythmic patterns and melodic shapes proliferate as icons or likenesses of one another: a dotted eighth followed by three thirty-seconds, arpeggiated triads preceded by chromatic appoggiaturas. 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.[93] At this level, musical signs are about each other, although they may also be about 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



EXAMPLE 6.1. Robert Schumann, *Waldszenen*, op. 82, mvmt. 7, "Vogel als Prophet," mm. 1–27

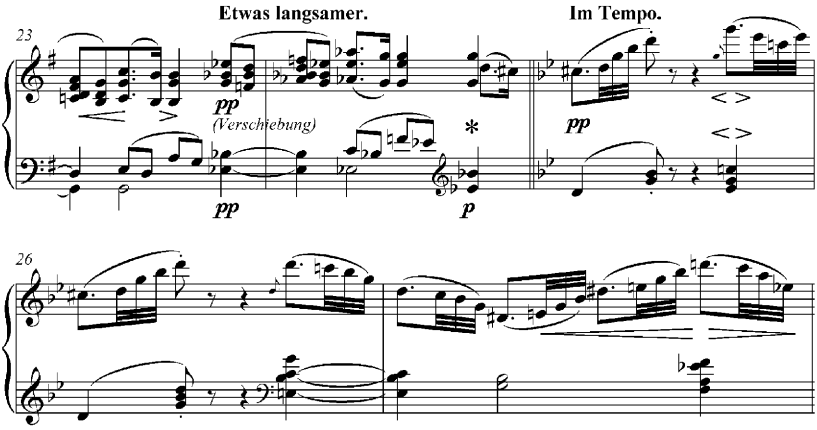
mental activity but as the dynamic proliferation of signs.[94] It may seem unnecessary to point out that the techniques of variation and elaboration, on which so much music is based, rest on a semiotic foundation of iconicity as the mediation of likeness and difference. But if all semiosis involves meaning, 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."[95]

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 serves to spur the further generation of interpretants. A listener unaware of the title would likely wonder what kind of utterance this is meant



EXAMPLE 6.1. (*continued*)

to be, what it expresses, what it is getting at. The melody invites listeners 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 some-



EXAMPLE 6.1. (*continued*)

one *in the world of the piece*. In this sense, "Vogel als Prophet" is about what Adams called "attentive listening to wild sounds."

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 C♯4 and C♯5 proceed to D4 and D5, respectively, it is only with the arrival on D6—and thus with the traversal of a sixteenth rather than a second—that the call truly reaches a place of repose.[96] Further elaboration of the call culminates in a cadence on the relative major B-flat (m. 5), and this harmonic pattern recurs in the restatement of the opening call in D minor and subsequent turn to F major (mm. 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 is neither that of 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

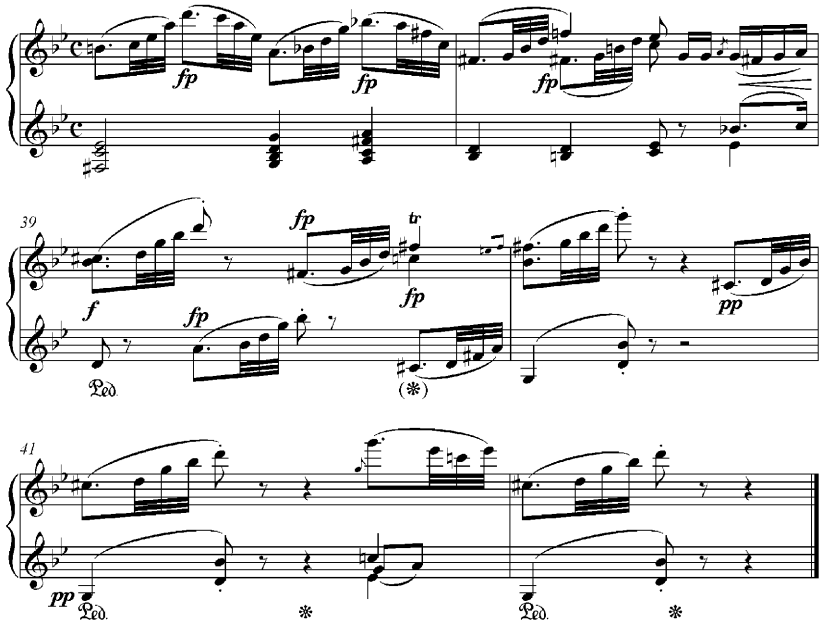
human listener enters into dialogue with the bird's cries—cries whose capacity to signify, to inspire the further proliferation of signs, displays the future orientation characteristic of prophecy. This dialogue does not last long, however, as the original birdcall returns in measures 16–18.

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.[97] Laura Tunbridge notes an undercurrent of warning in the melody stemming from its intertextual resonances in Schumann's oeuvre and from the original motto the composer selected for the movement: "Hüte dich, sei wach und munter!" ("Be on your guard, be awake and alert!") from Eichendorff's poem "Zwielicht" ("Twilight").[98] But she also concedes that the chorale comes across as relatively harmless, doing little to upset the course of the movement. 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 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, actually 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 birdsong begins. This moment could be thought of as a paralinguistic instance of what Friedrich Kittler termed the "minimal signified," or it could be understood in more formal terms as a pattern of utterance shared across species lines.[99] 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 (or morphodynamic) 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 sum, 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 can—the full-bodied semiosis of nonhuman others. But, the reader may counter, is not all of this 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 heard in measures 1–18 (example 6.2; mm. 28–36 not shown). 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."[100] 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



EXAMPLE 6.2. Schumann, *Waldszenen*, op. 82, "Vogel als Prophet," mm. 37–42

signs, continues on 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 discover "a train of thought that he can never fully develop."[101] Nineteenth-century character pieces and twentieth-century sonic geographies may inspire respect for the wider world of living sound, but, as R. Murray Schafer once wrote, "The rest is outside your front door."[102] Let what began with birds—Adams's birds of the north, Schumann's birds of the imagination—end with birds, with the calls of robins, cardinals, chickadees, mourning doves, red-winged blackbirds, blue jays, woodpeckers, flickers, finches, thrushes, sparrows, seagulls, hawks, wrens, and crows. May their trains of thought go on, and on, and on.