Ecomusicologies

By: Aaron S. Allen and Kevin Dawes

Allen, Aaron S., and Kevin Dawe. "Ecomusicologies," "Ecological Directions," "Fieldwork Directions," "Critical Directions," and "Textual Directions." In *Current Directions in Ecomusicology*, edited by Aaron S. Allen and Kevin Dawe, 1-15, 18-23, 82-88, 148-152, and 214-219. New York: Routledge, 2016.

This is an Accepted Manuscript of a book chapter published by Routledge in *Current Directions in Ecomusicology* on 25 September 2015, available online: http://www.routledge.com/9781317619536

Abstract:

What is ecomusicology? The question deserves a succinct answer, such as: Environmental studies plus music/sound studies equal ecomusicology. Our conceit, however, is that one plus one equal more than two: There is no one ecomusicology but many ecomusicologies constituting a dynamic field. One may wander this field leisurely to explore its interesting and relevant areas, or one might prefer to head in a particular direction. Twenty-two authors provide nineteen brief essays, some of which continue with further resources in an online supplement (http://www.ecomusicology.info/cde). As your "field guides," the editors of *Current Directions in Ecomusicology (CDE)* provide a volume introduction, which continues throughout the book in four directions (fieldwork, ecological, critical, and textual), plus a glossary, all of which provide a map of the territory as we find it circa 2015. However, the observer effect is surely valid here: Our collective commentaries of the field will change the lay of the land.

Keywords: ecomusicology | ecology | ecocriticism | ethnography

Book chapter:

ECOMUSICOLOGIES

WHAT IS ECOMUSICOLOGY?

The question deserves a succinct answer, such as: Environmental studies plus music/sound studies equal ecomusicology. Our conceit, however, is that one plus one equal more than two: There is no one ecomusicology but many ecomusicologies constituting a dynamic field. One may wander this field leisurely to explore its interesting and relevant areas, or one might prefer to head in a particular direction. Twenty-two authors provide nineteen brief essays, some of which continue with further resources in an online supplement (<u>http://www.ecomusicology.info/cde</u>). As your "field guides," the editors of *Current Directions in Ecomusicology (CDE)* provide a volume introduction, which continues throughout the book in four directions (fieldwork, ecological, critical, and textual), plus a glossary, all of which provide a map of the territory as we find it circa 2015. However, the observer effect is surely valid here: Our collective commentaries of the field will change the lay of the land.

Rather than just a collection of separate vignettes that provide exemplary content, this volume provides a map to navigate this complex field. Four basic points cohere *CDE:* 1) We emphasize making *connections* between the authors and essays in this volume and between the topics of ecomusicology and other fields and disciplines. 2) As in any healthy ecosystem, *diversity* provides strength and resiliency, and we have endeavored to include various perspectives and divergent views. 3) The *environment* (nature)—its study via the science of ecology and/or the interdiscipline of environmental studies—is central to ecomusicology as a branch of music/sound studies, the disciplines of which are usually in the arts and humanities. 4) And rather than a discipline or an interdiscipline (as are musicology and environmental studies, respectively), ecomusicology is best understood as a multi-perspectival *field*.

This introductory essay elaborates on those four points. But before doing so, we should provide a brief attempt at answering the question: What is ecomusicology?

Allen (2014) defines ecomusicology as, "the study of music, culture, and nature in all the complexities of those terms. Ecomusicology considers musical and sonic issues, both textual and performative, related to ecology and the natural environment." Titon (2013) elaborated on that definition (which had been available years before its publication date, including in Allen et al. 2011) by explaining ecomusicology as, "the study of music, culture, sound and nature in a period of environmental crisis." Consider this brief etymology of ecomusicology: The suffix "-ology" means "study of," and indeed ecomusicology is a field of study (rather than, say, of performance); the central "-music-" provides the object of our study, but we must acknowledge that this complex term relating to sound has many contested meanings due, perhaps, to its English roots (originally from Greek via Latin and French) meaning products of the nine Muses; and the prefix "eco-" is equally complex, with meanings ranging from the popular "green," "sustainable," "environmentally friendly," or "natural" to the more scholarly economics or ecology, both of which share the Greek root oikos, meaning household. But here an important clarification is necessary: Rather than as "ecological," the "eco-" prefix is better understood as "ecocritical," referring to ecological criticism, which is the critical study of literary and other artistic products in relation to the environment (and such cultural criticism typically takes ethical and/or political approaches). Furthermore, the study of music is often split into subfields, including historical musicology and ethnomusicology; the former is sometimes referred to simply as musicology, but the "musicology" of our ecocritical musicology is neither one nor the other (although ethnomusicology's critical, fieldwork, and process-oriented perspectives have a particularly strong resonance throughout CDE). Ecomusicology is not musicological or ethnomusicological; rather, it is both and more. Being more than the sum of its parts is possible because of the great complexity of the keywords involved in ecomusicology: music and sound, culture and society, nature and environment.

This terminological complexity is not intended to create a specialized, compartmentalized discipline that keeps out newcomers, nor does it entail some singular monolithic definition that disciplines ecomusicology. Rather, this complexity is intended to demonstrate the multifarious meanings that can be denoted and connoted by ecomusicology—and it does entail an understanding of many ecomusicologies existing simultaneously in dynamic relationships. Because the terms are complex we must keep talking about them. With an understanding of

terminological complexity in mind, and accepting for the moment a need for concision to aid in understanding, we can build on the etymology provided in the previous paragraph: Ecomusicology is the critical study of music/sound and environment. Or we can return to the first sentence above: Ecomusicology is the coming together of music/sound studies with environmental/ecological studies and sciences. Given the diversity of meanings for those disciplines and interdisciplines, a useful and productive way to conceptualize the field of ecomusicology is as *ecomusicologies*.

ECOMUSICOLOGY: A BRIEF HISTORY

We are not the first to use the plural ecomusicologies to map out a place for the related work of the authors here and elsewhere. This volume grew out of the first international ecomusicology gathering, Ecomusicologies 2012, held in New Orleans on October 29–30, 2012 (while Hurricane Sandy devastated the east coast of the United States), prior to the joint meeting of the American Musicological Society, Society for Ethnomusicology, and Society for Music Theory (see <u>http://www.ecomusicologies.org</u>). But *CDE* is not a conference proceedings, for there are many excellent scholars who could neither attend that meeting nor participate in this collection; their names and thinking, however, are found throughout the many useful bibliographies in this book. Nevertheless, the conference was an opportunity for conversations that improved the essays and provided connections among the authors in *CDE*. This situation also illustrates an important element of the nascent field of ecomusicology: Conversation, dialogue, collaboration, and community are central aspects of this field, more so than in typical, solitary humanistic inquiry.

Few collections of articles on ecomusicology exist side by side in one place as they do here. Three journals published short collections: Allen et al. (2011), Ingram (2011), and Kinnear (2014). Three significant monographs—by Ingram (2010), Von Glahn (2013), and especially Pedelty (2012)—have addressed ecomusicology, as have the articles by Rehding (2002), Toliver (2004), Guy (2009), and Allen (2012c). Furthermore, there are studies that could be considered ecomusicological but that do not use the term (e.g., Von Glahn 2003, Grimley 2006, Titon 2009, and the books reviewed in Allen 2012b). From these citations, one could assume that ecomusicology is a twenty-first-century phenomenon. Yet there are precedents: Morris (1998) engaged early on with the environmental work and thinking of John Luther Adams (see also Feisst 2012); Feld (1993) talked of an "echo-muse-ecology," and his research from the 1970s may be considered a classic ecomusicological study (Feld 2012); Schafer (1969, 1994) is a pioneer in soundscapes and acoustic ecology (see also Järviluoma et al. 2009), and in relation to his work Troup (1972) published what is likely the first use in print of the term ecomusicology. Earlier still, Gardiner (1832) is perhaps the first book explicitly on music and nature. Nevertheless, related concepts are found widely in global history: The Ancient Greek "Harmony of the Spheres" describes the harmonious musical proportions of the planets and how they order the universe, the Hindu Vedas have a creation story in which sound is fundamental, and there are various acoustemologies (sonic ways of knowing the world, Feld 1993) that are neither Western nor Eastern. Although music and sound studies may be late in the "greening" of the humanities (Allen et al. 2011), we are neither the first nor are we alone in identifying the topics and themes that reflect this recent flourishing of ecomusicology. But we do intend to elaborate on and deepen the conversation.

The term ecomusicology has had currency, albeit with ambiguity, since the late-twentieth century. But *CDE* provides more than just a working definition for ecomusicology by showing how scholars of sound and music are responding to current crises and challenges of the modern world. Ecomusicology has interdisciplinary relevance to the related fields of literary ecocriticism and environmental history, the sciences of ecology and psychology, the interdiscipline of environmental studies, and other academic areas that include the study of ethics in relation to people and planet.

The relevance of ecomusicology comes from its attendant possibilities for adjusting cultural and environmental norms, particularly via teaching. Music and sound can be further media to communicate important ecological ideas and encourage action regarding environmental and sustainability issues. Our contributors have commented frequently on the importance of *CDE* as a pedagogical resource. Although we maintain a high level of scholarly discourse throughout, we do believe that individual essays and even the volume as a whole will be useful in ecomusicology or "music and environment" courses. *CDE* can be both the seasoned scholar's and the new student's field guide. We hope it will inspire further such collections and textbooks, which will continue the dynamic shifting of the field.

CDE is not the first or last word on ecomusicology, for there still remains much to be done. Consider that there is still a need for basic research: from lists of environmentally themed works for concert programming and types of sonic practices that can be deployed in everyday experiential and communicative contexts, to more advanced explorations of emerging issues and topics to in-depth examinations of particular genres, places, and periods. The multi-disciplinary medium of film is a particularly rich realm for ecomusicological study (see Pedelty 2012, 187ff.; Mark 2014). And of the many topics and areas missing from this collection, consider that there is no discussion of Western music prior to the nineteenth century (but see Leach 2007) and that many geographical areas are not included here. Much remains to be done, and many connections remain potentially fruitful.

MAKING CONNECTIONS

The essays in this volume reflect a growing interest among scholars to question the boundaries of established areas of inquiry into sound and music. Rather than heading off in separate directions, however, there are many connections between the issues and essays in *CDE* and between this volume and scholarship elsewhere. We have divided *CDE* into four groups of essays that reflect the key directions identified within these (and other) ecomusicological studies: ecological, fieldwork, critical, and textual. These four sections provide a convenient framework to highlight general topological features in the field of ecomusicology. The sections are in no way mutually exclusive; in fact, many essays could belong a different section, demonstrating further the connectivity of the field but also the artificiality of drawing this intellectual map for it.

This opening essay continues in four short introductions preceding the four parts of the volume. In those, we provide an overview of the part, summaries of each essay, and a selected bibliography. In the summaries of the essays, we also describe connections between the essays of the volume and between individual essays and broader scholarly currents. In some cases, these connections come from our engaging with all the essays in *CDE*, while in other cases it is the result of connections the authors crafted themselves either by happenstance or through active collaboration. (Individual essays also provide cross-referencing.) We could be accused of being somewhat excessive regarding how frequently and redundantly we draw these connections, but we believe that identifying them (however concisely) is of central importance to illustrating the contributions of the authors and of the field of ecomusicology. Two connections that we likely under-emphasize, however, are those that are prominent and ubiquitous, if often implicit, throughout the volume: the prevalence of engagements with place and the critique of the nature-culture binary.

Despite origins in literary and music studies, ecomusicology is more than just artistic inquiry. Ecomusicology is part of the movement to champion a more connected place for humanistic and posthumanistic scholarship, as the environmental humanities are doing. A bigger and more ideal goal is the fusion of disciplines-not just the collaboration or mutual citation, but the amalgamation of scientific, artistic, and humanistic disciplines-that can be understood as breaking out of the rigid binary of C. P. Snow's "two cultures" (1959). Snow believed that the intellectual life and practical aspects of Western society were split into literary intellectuals and physical scientists: "Between the two [is] a gulf of mutual incomprehension-sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding" (Snow 1965, 39). Various fields of environmental, sustainability, gender, cultural, justice, and racial studies have long argued to break down such rigid disciplinary barriers and instead build bridges. Ecomusicology continues that trend and could be considered part of the "third culture" movement that stems from Brockman's (1996) efforts to improve scientific communication. Music and sound, however, are now being incorporated in new ways that make communication less monological and more dialogical, both between and beyond humans. CDE provides a snapshot of the current phase of this exciting conversation.

Although Allen (2012a, and in Allen et al. 2011) has addressed the issue of the "two cultures" and "three cultures" in the context of ecomusicology, he has not suggested ways in which they might work together. That is, how might we-ecologists and anthropologists, environmentalists and musicologists, scholars and communities-become co-investigators? Garrard (2004) summarized this problem as, "the difficulty of developing constructive relations between the green humanities and the environmental sciences" (178). The essays in this volume begin to clear paths for such work. Unlike early and more recent pioneering publications (Troup 1972, Rehding 2002, Allen et al. 2011, Feld 2012), the essays in this volume show the potential for ecomusicology to provide an intellectual and ethical umbrella for new and innovative areas of scholarship (Pedelty 2012 does consider ethical issues). In CDE these include: ecoethnographic justice (Mark); the retention of biodiversity for future generations via sustainable musical instrument making (Dawe, Ryan); the impacts of protest in, by, and/or on song (Sonevytsky and Ivakhiv, Pedelty); the co-survival of indigenous cultures and ecologies (Guyette and Post, Simonett); the reinterpretation of canonical (Titon) and non-canonical figures (Feisst, Von Glahn); the mutual interests of music psychology and ecological psychology (Windsor); the contributions of non-Western cultures to ecomusicological (and broader Western) thought (Seeger); unethical exploitation of music and natural resources (Stimeling); critical theory, ecocritical, and postcolonial approaches (Edwards, Ingram, Drott); the acoustic commons (Hui); and our ecological imaginations (Allen). Furthermore, two particularly bold scientist-humanist

pairings show that qualitative and quantitative research methods are not mutually exclusive (Boyle and Waterman) and that scholars of ecology and music can work together (Guyette and Post).

STRENGTH IN DIVERSITY

The numerous authors, their many disciplines and research areas, and the many (relatively short) contributions they provide for *CDE* are a result of the ecological metaphor that inspires this field guide: strength in diversity. The premise that biodiversity is good "cannot be tested or proven," according to Soulé (1985, 730). Soulé is a founder of the field of conservation biology, which has some parallels with ecomusicology in its melding of the objective (science) with the subjective/normative (ethics and aesthetics). The idea that biodiversity is good—that an ecosystem with a great variety of living organisms is resilient and sustainable even as it is dynamic and not static—is a guiding metaphor for ecomusicology (although most authors in *CDE* move well beyond metaphor). A significant value of *CDE* is its motley collection of viewpoints regarding disciplinary backgrounds, terminological meanings, and sonic materials.

The contributors to *CDE* are scholars working in a range of academic disciplines: ethnomusicology, environmental studies, and musicology, primarily, but also anthropology, communication studies, ecology, film and television studies, geography, history, and psychology. And while we find a relatively good balance of gender and professional rank among our contributors, we are overwhelmingly white Euro-Americans; such a problem reflects our disciplines and academia more generally, yet providing greater cultural diversity in our field is a problem our community must address to achieve the ideals that ecomusicology promotes.

The terminology of ecomusicology is diverse. Of the three sets of terms music/sound, culture/society, and nature/environment, any two sets could suffice in some contexts (e.g., "music and nature"), but the trio increases, and thus diversifies, the possibilities. As such, ecomusicology helps erode those curious and problematic binaries—or, at the least, it helps reveal the values that defend and/or challenge such binaries. Furthermore, the meanings of those individual terms are diverse and contested (more on which below).

The essays in *CDE* engage with a wide variety of sonic phenomena made by humans and nonhuman animals as well as inanimate objects and events. These include: pastoral soundscapes in the English countryside, Mongolian steppes, and the pages of Italian periodicals; indigenous ceremonies in Brazil and Mexico, and processes native to the human mind; forests and musical instrument workshops in Australia, Uganda, and Scotland; performance in pubs, calendrical songs in radioactive exclusion zones in Ukraine, and a reggae band on a countercultural Canadian island; radio on buses in Washington, D.C., and electronic compositions based on NASA data; art music from Minnesota and France, and global pop from Mexico; television commercials and telegraph harps; and birds and mice in Mexico, Italy, and the Amazon, and crickets in Japan. Such diversity is representative of ecomusicology because soundscape artists, music-based scholars of literary criticism, media and cultural studies scholars, historical musicologists, musical anthropologists, and bioacousticians all have wide-ranging interests regarding sounds of inanimate objects (from tectonic plates to foghorns to the aurora borealis) and animate beings (from birds to insects to humans). Breaking down disciplinary and terminological barriers and expanding the realm of sounds have been relevant to the interests of many ecomusicological pioneers, to whom we owe so much. R. Murray Schafer (1969, 1994) is both composer and musicologist. Steven Feld (1993, 2012) is an anthropologist, musician, and composer. Bernie Krause (1998, 2000, 2002) is a recording artist with a Ph.D. in bioacoustics. David Rothenberg (2002, Rothenberg and Ulvaeus 2001) is a philosopher and musician who worked closely with deep ecologist Arne Naess (Naess and Rothenberg 1989). Denise Von Glahn (2003, 2013, Allen et al. 2011, Allen et al. 2014) combines musicology with American history and women's studies. Jeff Titon (2009, 2013, Allen et al. 2014) is an ethnomusicologist, musician, folklorist, and fiction writer. David Ingram (2010, 2011) works in film, television, and literary studies. Mark Pedelty (2012) is an anthropologist, journalist, musician, and historian.

It should not be surprising, then, that an enclosure for ecomusicology is difficult to construct. With connections between music/sound, culture/society, and nature/environment, the field straddles the arts, humanities, social sciences, and sciences. Scholars interested in ecomusicology continue to develop the critical and interdisciplinary perspectives ignited by "the new musicology" of the last quarter of the twentieth century; they explore the significance of sound and music in human cultures and societies worldwide while also focusing attention on the wider soundscape of and impacts on the planet we call home. In considering how Earth's landscapes, environments, and acoustic ecologies are recognized, engaged, captured, and portrayed through sound and music, these scholars inevitably connect their work with environmental studies, which itself is an amalgamation of many connected disciplines that has been growing since the 1970s. Scholars of music and sound also have the power to make contributions to current research paradigms and global issues affecting humans and the environment. After focusing too long on the supposedly "unique" human trait of musicking, and after some necessary and appropriate hand-wringing (Guy 2009), planet Earth and its many complex systems and problems have begun to take center stage in music and sound research (Allen et al. 2014). Doing so helps humans understand more clearly how we are part of and how our survival depends upon the Earth.

ENVIRONMENT/NATURE

Ecomusicology does not yield well to attempts at a simple definition, notwithstanding our attempt at the beginning of this essay. A starting point is that it is a scholarly field at the intersections of sound/music, society/culture, and environment/nature. But these are extraordinarily difficult terms to tie down, as Williams (1985) and Worcester (1993) remind us. We cannot reify the key terms of ecomusicology, for to do so would be to channel a freely meandering stream: That unencumbered stream is an important aspect of ecosystem health. But we can provide a little more clarity (or confusion, as the case may be) by considering the terms music, culture, and nature. What is particularly important for ecomusicology, however, is this last term—considerations of music and culture, or sound and society, are already standard in music/sound studies, but adding a robust understanding of environment/nature is central for ecomusicology.

Work in ecomusicology is on a music-sound continuum: the ecomusicological objects and/or subjects of study are parts of complex systems involving a wide range of sonic phenomena. The difference between "music" and "sound" here has more to do with taste and cultural value than acoustic facts. Ethnomusicologists have long problematized "music" (Nettl 1983, 2005); it remains a difficult word to apply universally because some cultures do not have a word for what we in the West would describe as "music" in its more restricted sense. In fact, the root of the word, the Greek *mousikē*, did not mean what is commonly meant today but was, instead, a union of song, dance, and word with social, religious, and educational significance (Murray and Wilson 2004). As such, we can understand its Ancient Greek origins as a referent to the works of the Muses. Even in modern-day Greece many communities would talk of *glendi* or communal celebrations involving musicians, dancers, and poetic recitation (Herzfeld 1985, Cowan 1990, Dawe 2007). Popular music studies regularly connect poetry and dance with music as well as the festivals and contexts for so much modern entertainment. Referring to "sound" provides a more encompassing perspective, but we also must be cognizant of moving away from a clarity that some might expect (however problematically) with "music."

The problems of definition continue, particularly because the keywords in play here are some of the most complex in the English language. Williams (1985, 87ff. and 219ff.) said as much for "culture" and "nature." Culture is conceived differently depending on linguistic and disciplinary backgrounds; early in the English language, what was a process (the tending of natural growth, as in cultivation) became a metaphor (for that very cultivation) and then developed to the more abstract concept we have today. Nature has at least three areas of meaning: an essential quality, the inherent forces directing the world and/or humans, and the material world (with, or sometimes more problematically, without humans).

Clarification of ecomusicology's keywords is important (for *CDE* in particular and ecomusicology in general). This would not seem a strange preoccupation for Sebeok (1977), for example, whose pioneering work in human and (other) animal communication synthesized research across a wide range of disciplines, moving from biological to literary semiotics and involving the work of bioacousticians and linguists. This and other perspectives are helpful to understand the background of the essays in *CDE*, most of which deal only briefly with complex terms that have extensive and contested histories; the appended glossary of keywords helps in some respects, but we also must resist the temptation of terminological distraction at every turn. Most important presently, however, is some further explication of the environment/nature component of ecomusicology. In essence, doing so aids in understanding the "eco-" prefix, and so we mention here several of our own guides to this complex field of study.

Soper (1998) distinguished nature from scare-quoted "nature" to tease apart the referents to the reality of the natural word in the former and the referents to the postmodern construction of the latter. Coates (1998) explored the great variety of uses of the term throughout history. Furthermore, Nature (capital "N") can be used in a rhetorical way to associate the term with an apparently supra-human concept of the term, as distinct from the mere stuff of life. For example, the transcendental Nature of Ralph Waldo Emerson or of John Muir is distinct from the utilitarian natural resources extracted from nature of John Stuart Mill or Gifford Pinchot (see Callicott 1994; a similar distinction is made in an ecomusicological context between preservation and conservation in Toliver 2004). Hinchliffe (2007) clarifies this as well: "'Nature' with a

capital N [... is] the idea of a fixed and single world, totally outside systems of understanding and acting" (3). Ecology is an academic, scientific discipline that conducts objective research into real-world nature (sans scare-quotes); but ecology is also used popularly to refer to sustainability issues or, just simply, nature. And sustainability is a concept that has become slipperier as it is co-opted and bandied about in various politically correct and greenwashing ways, despite many demonstrably noble attempts to do good by it. Furthermore, "environment" goes beyond multivalence to be downright problematic: by setting up "environment" as distinct from what is "human," we create a nefarious binary that seems somehow to set up "out there" as distinct from "us," when we are in fact part of, from, and nothing more than nature or the environment "out there." (An example of this problematic perspective is the "built environment," i.e., architecture, which is made by and for humans of both humanly produced and naturally provided materials such as plastics and stone.) There is, to paraphrase Schama (1995), a necessary union between nature and culture, between environment and human. It is not productive to construct binaries-unless they are used heuristically, then complicated, and ultimately torn down. Bateson (1972) presaged this call, calling for "rigor and imagination" in the study of these concepts (1979, 239). Ecomusicology, its components and influences, its practitioners and adherents, should be subject to both rigor and stretches of the imagination, for if established definitions (however recent and however tenuous) become set in stone, then the field will stagnate. (See Titon 2013 for an excellent further unpacking of the term nature for ecomusicology.)

Literary ecocriticism has spent the past few decades problematizing binaries such as natureculture and taking seriously figures such as Bateson (1972, 1979) and Eisley (1969). Both Bateson and Eisley ranged widely across the sciences, social sciences, and humanities—as does ecomusicology. We are not alone in the humanities in taking this approach. Ecocritics have examined the mediating influence of film, literature, poetry, advertising, and other cultural products on our understanding of nature (Glotfelty 1996, Garrard 2004). Historical and ethnographic disciplines of musicology have a history of borrowing methods and approaches from literary studies—and a history of somehow always arriving late (as with gender, race, and politics). This influence from literary studies and ecocriticism on ecomusicology is part of that trend.

FIELD, NOT DISCIPLINE

The essays in *CDE* are a diverse collection of connected approaches to this nexus of music/sound studies and environmental studies. As such, ecomusicology is best understood as a multi-perspectival field rather than a defined discipline with a prescribed and rigid method. On the one hand, such a claim is descriptive of ecomusicology as we find it in the wider literature, not just as exhibited in this volume. But on the other hand, the claim for ecomusicology as a field is prescriptive because it relates to a broader gesture we hope this collection can make.

Consider the following proposition: How do humanists contribute to confronting some of the gravest threats to humanity, and how, in particular, can music scholars contribute to the study of the environmental crisis? (For related questions, see Allen et al. 2011, 392.) As Worster (1993) has argued, "Natural science cannot by itself fathom the sources of the crisis it has identified, for the sources lie not in the nature that scientists study but in the *human nature* and, especially, in

the *human culture* that historians and other humanists have made their study" (27). Echoing Worster are Conway, Keniston, and Marx (1999), who reflect on the fact that, "many, perhaps most, of our most pressing current environmental problems come from systemic socioeconomic and cultural causes and for this reason their solutions lie far beyond the reach of scientific or technical knowledge" (3).

Do scholars of music and sound have a role to play in that endeavor? Rehding (2002) argued that studies of music and nature opened up a "cornucopia" of issues: musical aesthetics, the decentering of the musical work and the authority of the composer, aspects of legitimation, etc. "Ultimately," he concluded, "the study of nature urges us to pose anew the old question: what is this stuff called music?" (319–320). While ecomusicology seems poised to contribute to music studies in general, can ecomusicology be a rigorous endeavor that engages with serious questions that go beyond such disciplinary issues? As the recent *Grove* definition concluded, "ecomusicology can offer fresh approaches to confronting old problems in music and culture via a socially engaged scholarship that connects them with environmental concerns" (Allen 2014). The contributors to *CDE* demonstrate that ecomusicology can contribute to larger cultural and scholarly dialogues that bridge traditional disciplinary boundaries.

The distinctions between "field" and "discipline" are important here. A field is a place where many disciplines come together, cross-pollinate, provide mutually beneficial services, and stimulate further growth and change. Thus, the inter-, cross- and/or trans-disciplinary approach we take to a subject area—namely, studies of culture and nature relations through the critical analysis of music and sound production and products—should be distinguished from the creation of a new discipline, which would be distinguished by a paradigm that coheres on a particular set of related questions or problems and a generally agreed-upon methodology. Ecomusicology does not yet, and perhaps should not ever, have such disciplined agreement. Furthermore, this idea of the field is central to scholars in both ecology and ethnomusicology as that place where they conduct their research. *CDE* is targeted both to those seeking to understand the literal/physical field they are entering and to those scholars desiring an armchair view of the whole. In other words, and to reference two of the competing notions of nature we discussed above, this volume provides an overview and in-depth, multi-perspectival examination of ecomusicology both for those who work in, on behalf of, and with nature as well as for those who want to understand further the nature of ecomusicology.

Disciplines are "language-using communities" that connect writers, texts, and readers and that have "particular ways of doing things" (Hyland 2011, 179). Related to this understanding is a hallmark study in music scholarship that sought to bridge internal disciplinary splits (Bergeron and Bohlman 1992). Musicology, ethnomusicology, and music theory are different disciplines with separate professional societies joined by a common interest (music), but they approach it with different practices. Bergeron invokes Foucault's (1977) understanding of "discipline" as the ordering of bodies, but she also employs the term "field" rather loosely, sometimes referring to those music disciplines as fields: "The scholarly 'fields' represented by authors in this book [i.e., Bergeron and Bohlman 1992] are, of course, enclosures in very much the same sense, distinguished from one another principally by the nature of the conduct they foster. A field is, in other words, a site of surveillance, a metaphorical space whose boundaries, conceived 'panoptically,' are determined by the canon that stands at its center" (Bergeron and Bohlman

1992, 4). We differ in our use of field, and so we must distinguish "field" and "discipline" to clarify their use. We maintain the meaning of "discipline" as a community that shares ways of doing things—and in this sense referring to those common disciplines as departmentalized (for better or worse) into faculty groupings in institutions of higher education. But a "field" is not a discipline; rather, a field is a place (if it is an enclosure, then it is a porous one) for diverse disciplines to enter into dialogue.

Working in diverse ways with established fields, disciplines, and interdisciplines, ecomusicology seeks an integrative approach that is less constrained or convinced by boundaries that discipline or by attempts to turn peaks of excellence into ideological mountains. Currently ecomusicology's position in subgroups of two professional societies1 belies its potential as widely integrative, or even radical. The various disciplines and fields of scholarship mentioned above have their own struggles with definition, and they also share constraints on outreach. Within this intellectual landscape, ecomusicology provides paths to move more freely among the plains and valleys that form the fields that run between these disciplinary mountains; we might understand ecomusicology as providing an infrastructure of viaducts and aqueducts that transect the valleys and peaks of current sonic and musical scholarship, mobilizing and transporting revitalizing forces at a time when they are urgently needed. Ecomusicology contextualizes and champions the significance of sound and music studies to all life. As we seek to emphasize people and planet connections and understandings made sonically in a time of crisis, such an endeavor is timely. We must remain attentive, however, because due to its dynamic nature, ecomusicology will (and should) change in time and space, resulting in the need for new perspectives, new guides, new maps, and new directions.

PART I: ECOLOGICAL DIRECTIONS

The essays in this section are connected through a shared grounding in the science of ecology and its related fields: climatology, natural history, landscape ecology, resilience theory, and soundscape ecology. All four essays take different approaches to this discipline: from a strict division between environmentalism and science that contributes to a method of analyzing performance (Boyle and Waterman) to arguments for a synthesis of landscape ecology and soundscape studies and for greater collaboration among scientists and humanists (Guyette and Post), and from the impacts of climate change on resilient tree species that provide musical instruments (Ryan) to the (re)interpretation of a canonical literary figure as a proto-ecologist who anticipated ecological and ecomusicological ideas (Titon). As seen throughout this volume, ecology-the science and the related social movement known also as environmentalisminforms and inspires ecomusicology. Nevertheless, ecology does not govern or dictate ecomusicology: instead of ecological musicology, it is more useful to understand ecomusicology as ecocritical musicology, with ecology connected to music/sound study via cultural criticism. The four essays here show that the influence of ecology is mostly indirect or collaborative rather than direct, although the essays by Boyle and Waterman and by Guyette and Post work toward a synthesis. All six authors are well informed by particular places and their fieldwork, an approach that ecologists and ethnomusicologists share-so much so, in fact, that Guyette and Post coin the term "ethno-ecomusicologist."

Boyle and Waterman, ecologist and ethnomusicologist respectively, provide a methodology for an ecology of musical performance: an ecological ecomusicology based in the ethnomusicological study of performance that is distinct both from an environmental ecomusicology based in critical scholarship in the arts and humanities and from the social and political realm of environmentalism. Beginning from the premises that ecology informs ecomusicology and that ecology is a rigorous science distinct from environmentalism, Boyle and Waterman compare methodologies from animal behavioral ecology and ethnomusicology in order to develop potential approaches. Based on the ecological study of birdsong and the scientific method, they offer three methodological approaches-observational correlative studies, comparative studies, and controlled experiments-with hypothetical examples of each. Through their contrast of ecological and ethnomusicological method, they identify methodological differences as well as particular constraints and advantages. Their work here is in direct dialogue with two major areas of scholarly inquiry: avian bioacoustics (Kroodsma and Miller 1996, Marler and Slabbekoorn 2004) and ethnographic fieldwork (Barz and Cooley 2008), two areas that Feld (2012) connected but with more focus on ethnography and critical theory. Currier (2014) has also called for an ecomusicology that is more solidly based in ecology, although his reliance on Gaia Theory rather than ethology/animal behavior results in a proposal that is quite distinct from Boyle and Waterman's approach. Boyle and Waterman's ideas connect with the long-established field of biomusic (Wallin 1991, Gray et al. 2001, Fitch 2006), the new science of soundscape ecology (Pijanowski et al. 2011, Farina 2014), and the discussion of ecomusicology that began prominently with Rehding (2002) and continued thereafter elsewhere (in Toliver 2004, Allen et al. 2011, Perlman 2012, Keogh 2013) and, of course, throughout this volume. In their distinction of the prefix eco- in ecomusicology, every essay in the volume is in dialogue with Boyle and Waterman implicitly or explicitly: the essays of Part I regarding the science of ecology, the essays of Part II regarding fieldwork, and the essays of Part III and Part IV regarding the distinction of ecology and environmentalism. In contrast to Boyle and Waterman (and most scientists), the essays by Feisst and by Pedelty use ecology in the popular sense of environmentalism (see also Rehding 2002); the essays by Sonevytsky and Ivakhiv and by Windsor employ still more varied uses of ecology. Guyette and Post, Ryan, Seeger, and Titon also provide contrasting understandings of relations between humanists and scientists (and for Seeger, between scientists and shamans). Regarding Boyle and Waterman's discussion of birds, issues related to animals also are relevant to Allen, Feisst, Guyette and Post, Ingram, Seeger, Simonett, and Titon; and regarding improvisation, see the essays by Titon (regarding Thoreau's "unpremeditated music") and by Windsor (who also engages with the empirical study of music and performance).

Guyette and Post are also a partnership of ecologist and ethnomusicologist, respectively. They represent two entangled realms of sound study, one from the sciences and the other from the humanities, and both with similarities and differences in their goals studying sound in the environment. After outlining their respective fields' typical approaches to sound- and music-related studies that interface with ecology, they provide two cases to illustrate how greater collaboration between soundscape ecology and ethnomusicology could result in better research that is more effective in managing landscapes, enhancing knowledge, and working toward sustainability. The first case is of western Mongolia's pastoral nomadic herders, who have understandings of sound that can contribute ecological studies and whose music making is influenced by ecological factors. The second case is about efforts in southern New Zealand that

aim to remove invasive predators to allow native bird populations, and the resulting soundscapes, to return; areas near human settlements have had more success than areas of wilderness, emphasizing the role humans play in rebalancing ecosystems. In essence, Guyette and Post propose ecomusicological approaches that ask ethnographers and sound studies scholars to draw more on ecological understandings of the natural world, and that ask soundscape ecologists to consider humans as important agents in the landscape who provide important ways of understanding connections between sound and land. Thus, they call for both fields to collaborate more in order to provide ecological knowledge about sound and land that values and benefits humans and non-humans alike. Guyette and Post seek to bridge the problematic "two cultures" that separates humanistic and scientific endeavors (Snow 1959, Allen 2012a): criticizing both soundscape ecology for minimizing humans (Farina 2014) and ethnomusicology for minimizing abiotic and non-human biotic elements (Blacking 1973), they ultimately promote an approach that considers all sound (Schafer 1994, Sorce Keller 2012, Titon 2013). Cultural and physical geography have also come together with sound study in Grimley's work on art music (Grimley 2006, 2011) and through his Hearing Landscape Critically network (2015). Elsewhere in this volume, Guyette and Post's essay resonates especially with Boyle and Waterman regarding ecological and ethnomusicological collaboration, although the results are different. The concept of the soundscape is a common area of interest to Allen, Hui, Simonett, and Titon. Traditional ecological knowledge is particularly relevant in the essays by Simonet and Seeger, the latter of whom is also concerned with the roles of scientists and humanists. With Dawe (regarding small guitar-making businesses) and Ryan (regarding landscape management), Guyette and Post share a concern for using ecological science for improvements toward sustainability. Animal studies are also a link with the essays by Allen, Boyle and Waterman, Feisst, Ingram, Seeger, Simonett, and Titon.

Ryan examines the impacts of climate change, human land use impacts, and natural environmental processes on the iconic indigenous music cultures of Australia: the didjeridus (didgeridoos) made from eucalyptus trees' termite-hollowed trunks and the musical gumleaves that come from their foliage. Eucalypts (gum trees) are naturally resilient species; that is, they tend to endure despite ecological change and to return after significant environmental impacts. The music cultures that rely on eucalypts have also exhibited resilience: didjeridus have spread to the Western world, and leaf playing has made some surprising comebacks. But given the complex changes that lie ahead under climate change and the increasingly consumptive human exploitation of nature, can these social-ecological systems remain resilient? And furthermore, how will the highly prized eucalypts-the "didj tree" (Darwin stringybark) and "Stradileaf" (yellow box)-fare? As resilient species and cultures, these social-ecological systems are subject to a matrix of confounding factors; we can expect altered sonic worlds to emerge. Ryan's work is in dialogue with ecological science, understandings of climate change both scientific (based on findings from Australia's national research organization) and social (Urry 2011), theories of resilience (Holling 1973, Zolli and Healy 2012) and sustainability (Titon 2009, Allen et al. 2014), didjeridu music cultures (Lindner 2004), and a variety of ecomusicological lines of inquiry (Ingram 2010, Allen 2012b, forthcoming). In relation to essays in this volume, Ryan takes a middle ground between the distinction set up by Boyle and Waterman, basing her work on the scientific ecology yet also adopting environmentalist positions that advocate for action with regard to ecosystems (as do Guyette and Post). Seeger provides another example of the

importance of forests to music cultures, and Dawe also shows how wood is used to construct musical instrument cultures both physically and symbolically.

Titon offers an understanding of Henry David Thoreau as ecomusicologist: as someone who connected sound, music, cultural criticism, natural history, ecology, and environmentalism. Sound was a major influence on Thoreau and an important motivator for his goals of preserving nature. Titon asks the question, "Why Thoreau?"-i.e., why is Thoreau now relevant for ecomusicology? In response, he has three interwoven reasons for thinking with Thoreau, which he does via Thoreau's journals. First, Thoreau thinks about music and place, i.e., about sound in a local ecosystem. Second, Thoreau thinks about connections between music, sound, presence, and co-presence. Third, Thoreau thinks about a nature worth wanting. Titon provides an understanding of ecomusicology as if from Thoreau; this is an understanding that avoids making human music and culture primary and instead finds sound and music as indicators of healthy ecosystems. Thoreau understood himself in relation to nature not as an individual but rather in a relational ontology and epistemology acknowledging the importance of community and the role of sound as communication in all living systems. Titon's understanding of Thoreau as a protoecologist and environmentalist is in dialogue with the fields of literary ecocriticism (Buell 2005, Rozelle 2006) and soundscape ecology (Pijanowski et al. 2011, Farina 2014). Thoreau combined the science of ecology with the ethical mission of environmentalism as in the field of conservation biology (Soulé 1985). Titon has written on the importance of Thoreau for ecomusicology elsewhere in the context of ethnomusicolgy and sound studies (Titon 2013, forthcoming). In this volume, Titon's interpretation of Thoreau as ecologist relates to the distinction of ecology and environmentalism in Boyle and Waterman: Thoreau brought these fields together without confusing them. With regard to Titon's interpretation of Thoreau as an ecomusicologist, see also Allen's historiographical observations (which are also relevant to Edwards and to Sonevytsky and Ivakhiv). Other shared topics in this volume include soundscapes, which the essays by Allen, Hui, Guyette and Post, and Simonett also discuss; the sound commons, an idea Titon developed in an earlier essay (2012) and that is also of interest to Hui; improvisation, or as Thoreau put it "unpremeditated music," which is the upshot of Windsor's essay (and of interest to Boyle and Waterman); ideas of place (bioregionalism, dwelling, topophilia), which are important to the essays by Edwards, Ingram, Simonett, and Von Glahn in particular (and to many others in general); and ecocriticism and the pastoral, which are important to Ingram and Drott. Animal studies are also relevant in the essays by Allen, Boyle and Waterman, Feisst, Guyette and Post, Ingram, Seeger, and Simonett. Titon shares an interest in epistemological and ontological issues with Edwards, Seeger, and Simonett, and his discussion of co-presence is central to Edwards.

Ecomusicology has been informed most prominently by the approach of ecocriticism, i.e., ecological criticism (Part IV). It is criticism (Part III) that bridges ecology and musicology in ecomusicology; via this grounding in humanistic/posthumanistic approaches, we might understand ecomusicology as being one small step removed from, yet still connected to, science. In this way, ecomusicology participates in the bridging of the so-called two cultures (Snow 1959, Allen 2012a) and, through the incorporation of the social-science-informed field of ethnography, even the "three cultures" (Kagan 2009). One upshot of this bridging, and a further unifying element of the essays in this section, is that of an applied ethical element: Boyle and Waterman provide a model to analyze performance with an ultimate goal of applying that ethically; Guyette

and Post aim for responsible landscape management that includes equally humans, non-human life, and abiotic features; Ryan advocates ethical and sustainable arboreal resource management for iconic musical instruments; and Titon's understandings of Thoreau contribute to engendering in us a nature worth wanting. This collaboration of science and ethics is not new; the field of conservation biology, developed in the 1980s, is a related example (Soulé 1985). One prominent direction in ecomusicology pursues understanding sonic and musical issues via a closer application of ecology in particular places. That science of ecology is as important as ethical criticism.

PART II: FIELDWORK DIRECTIONS

The essays in this section are connected through their reliance on fieldwork. All five essays include research and experiences informed by ethnography in particular places. The perspectives of two authors, Mark and Ivakhiv, are grounded in the interdisciplinary field of environmental studies, and together with Dawe, who has training in ecology and ethology, they connect ethnomusicological and environmental studies both practically regarding applications of environmental justice (Mark) and sustainability (Dawe) as well as intellectually regarding our understanding of music and environmental issues (Sonveytsky and Ivakhiv). Seeger and Simonett both draw on their experiences in Latin America (the rainforests of the Brazilian Amazon and the semi-arid regions of northwestern Mexico, respectively) to offer examples that differ from Western thinking and terminology, particularly regarding concepts relating to animals and ecology. In addition to their fieldwork experience, the careers and contributions of all six authors of these five essays are grounded in multiple understandings of ecology—sometimes different from those provided in Part I.

Seeger provides a warning for ecomusicology regarding ethnocentric thinking about nature, animals, humans, and music. He illustrates conceptions of those terms (and their attendant binaries) that differ from Western thinking by examining the how the Kĩsêdjê/Suyá Indians of Brazil relate with animals, and how in turn those relationships are manifest in their music. Kīsêdjê maintain that the animals and fish, which they hunt and need for their survival, live in villages where to each other they look and act like humans. Each species has their own songs, which are often used for communication with other species. The Kīsêdjê themselves learn their music from the other species. Seeger thus argues that the distinction between humans and animals is more fluid than Western scientific understanding suggests. Building on the idea of perspectivism (Viveiros de Castro 2004) to challenge Western understanding of the world, Seeger stops short of condemning science; to understand the relations between music, culture, and nature, there is room for multiple perspectives, especially when deployed carefully. The upshot is that Seeger encourages us to be self-reflective and flexible in order to avoid ethnocentricism. Seeger is drawing on a long and distinguished career working in the Amazon (Seeger 1981, 2004), and his essay here engages with recent thinking in ecomusicology and related fields in ethnomusicology. For example, Allen (2011, 392-393) outlines the complexity and multiplicity of definitions for the terms involved in the ecomusicological project; Titon (2013) deepens that understanding of such terminological polyvalency. Seeger and the authors he cites (e.g., Roseman 1998, Ramnarine 2009) expand the necessary critique of those core terms. The idea of non-human music is addressed in Brabec de Mori and Seeger (2014) and in Sorce Keller (2012); these ideas engage with the field of zoomusicology (Martinelli 2008, 2009) and

constitute an area of posthumanist studies in music that critiques the culture-nature binary. In this volume, Simonett provides a similar case of the human-animal fluidity, while Guyette and Post offer parallels with regard to humans and domesticated animals; these authors share with Seeger an interest in traditional ecological knowledge. From a different and less ontologically critical perspective are the issues with animals in the essays by Allen, Boyle and Waterman, Feisst, Ingram, and Titon. Epistemological concerns are also of shared interest with Edwards, Simonett, and Titon. And Pedelty, Simonett, and Seeger share a Latin American context for their work. Seeger finds a place for Boyle and Waterman's ecological approach to performance, even as he does not see it as uniquely scientific: Seeger encourages us to understand as similar the approaches of both scientists and shamans. Titon's essay provides a middle ground: Thoreau, as protoecologist/early ecomusicologist, seems a figure between scientist and shaman. Seeger's essay addresses the nature-culture debate, as do Dawe, Edwards, Feisst, Hui, Mark, Simonett, Sonevytsky and Ivakhiv, and Windsor.

Simonett's study of the Yoreme in northwestern Mexico encourages us to rethink dominant Western epistemologies and ontologies regarding nature and culture as mediated through music and dance. Through the lens of sentient ecology, which considers communicative relationships between human and non-human animals, the ceremonies of the Yoreme provide examples of how music is not purely human. Rather, music emerges from the sentient ecology between humans, non-human animals, and the abiotic environment. Yoreme singers, musicians, and dancers merge with their non-human contexts by transforming into animals and co-inhabiting an enchanted world. The Yoreme cosmology, as expressed in music and dance, has developed through experiencing life with animals and through dwelling in a particular place. Such a sentient ecology grants personhood to all non-human life, thus challenging Western Cartesian dualism. Simonett's essay engages with diverse areas of scholarly inquiry: from studies of nonhuman music and zoomusicology (Martinelli 2009, Brabec de Mori and Seeger 2014, Sorce Keller 2012) to critiques of landscape (Tilley 1994, Grimley 2011), and from philosophy (Heidegger 1971) to anthropology (Descola and Pálsson 1996, Ingold 2011). In particular, Simonett finds problematic those conceptions of landscape and soundscape that simplistically relate place and sound; she furthers this critique by enmeshing human-environment relationships in relational multi-sensory experiences (Simonett 2014). In this volume, Simonett furthers the epistemological and ontological re-evaluations proffered especially in the essays by Edwards, Seeger, and Titon. Relationships between humans and animals are further explored in Guyette and Post and in Seeger (in particular regarding traditional ecological knowledge) as well as in the more general animal studies of Allen, Boyle and Waterman, Feisst, Guyette and Post, Ingram, and Titon. The idea of dwelling relates to other ideas of place (bioregionalism and topophilia), which are important to the essays by Edwards, Ingram, Titon, and Von Glahn in particular (and to many others in general); Pedelty's study of Mexican pop music offers an extreme contrast to Simonett's study of Mexican indigenous music, while Seeger's essay offers a third Latin American context. Soundscapes are a shared topic along with Allen, Hui, Guyette and Post, and Titon. Studies of perception are a common interest of both Simonett and Windsor. Simonett's essay addresses the nature-culture debate, as do Dawe, Edwards, Feisst, Hui, Mark, Seeger, Sonevytsky and Ivakhiv, and Windsor.

Dawe emphasizes the importance of material. In so doing, he argues for a political ecology of music that necessarily engages with the fundamental primary resources necessary for cultural

production. The musical instrument is an excellent example of the relationships between sound, environment, and society; of particular interest, however, are the multifarious components, inputs, and results of those connections. Dawe engages with the physical impacts and symbolic aspects of musical instruments, as well as the sensual cultural and sustainable practices of guitar makers. He profiles two instrument-making traditions, in Spain (guitars) and Crete (lyra, bowed lute), and two guitar makers in Scotland and Uganda who exemplify twenty-first-century ideals that relate to materialism. Materials for musical instruments serve as a nexus for cultural and ecological awareness and for greater sustainability. Ultimately, Dawe advocates for a materialism that creates more responsible encounters between people and materials. Dawe's essay relates to a significant body of organological scholarship, particularly in his area of expertise, the guitar (Dawe 2010, 2012), as well as regarding other situated studies of (Bates 2012) and ecomusicological investigations of materials for (Allen 2012) musical instruments. At the same time, his work is in dialogue with political ecology and materialism (Bennett 2010), anthropology and materialism (Ingold 2012), and sustainable material design (McDonough and Braungart 2002)-demonstrating his commitment to the idea that, indeed, materials matter. In this volume, both Ryan and Dawe are concerned with the provenance, collection, crafting, and distribution of fundamental resources for musical instruments. Sustainability is also of interest to Ryan as well as Guyette and Post. Dawe's discussion of materialism relates to Edwards's examination of that philosophy. Dawe's essay addresses the nature-culture debate, as do Edwards, Feisst, Hui, Mark, Seeger, Simonett, Sonevytsky and Ivakhiv, and Windsor.

Mark examines musical communities in search of clues to the remarkable counter-culture of radical politics on Hornby Island, Canada. Through his development of ecoethnographic justice, a methodology that seeks to employ ethnographic research to improve the balance between humans and the environment, Mark critiques traditional fieldwork approaches. Hornby has long been seen as a unique place for artistic, natural, and social experience: from its unique geographic features to the independence of the individuals and communities that have made it home, many mainlanders desire to visit the Island and absorb something of its vibe. Not surprisingly, the place is threatened by economic, social, and environmental problems-from skyrocketing costs and taxes and the resulting poverty, gentrification, and inequality, to water scarcity, resource extraction, and impacts from a high volume of tourists. Nevertheless, the small rural community of Islanders maintain solidarity and work to reproduce the environmental and social governance that make the place so special. In part, they do so through making music. Mark's participant observation in bands, and his particular focus on one situation, explores the ideas of vibration and the social skills that musicians bring to this particular struggle. Mark's work is in dialogue with environmental studies (Bateson 1972, Evernden 1993, Livingston 2007) and ethnomusicology (Keil and Feld 1994, Small 1998, Turino 2008), especially regarding his development of the method of ecoethnographic justice. By focusing on an island, he is building on the work in Dawe (2004), and by taking a decolonizing approach to work in a Western context, Mark is building on Smith (1999). With regard to this volume, Drott is also interested in postcolonial issues, particularly with regard to tourism (an issue relevant to Feisst as well). Mark's methodology is grounded in ideas expressed by Titon and in Edwards, particularly regarding the posthumanist, neo-materialist approach. Mark and Hui are both concerned with environmental ethics, especially as related to Leopold (2001), but in different ways: Hui from a historiographical perspective and Mark from an experiential, applied one. Mark addresses the issue of environmental justice, as do the essays by Pedelty and by Sonevytsky and Ivakhiv.

Mark's essay addresses the nature-culture debate, as do Dawe, Edwards, Feisst, Hui, Seeger, Simonett, Sonevytsky and Ivakhiv, and Windsor.

Sonevytsky and Ivakhiv examine concepts of nature and culture in the context of traditional music and identity of villages impacted by the 1986 Chornobyl (Chernobyl) Nuclear Power Plant accident. The creation of exclusion zones in the wake of the disaster resulted in massive resettlements of longstanding village cultures; in the late-Soviet period and in post-Soviet Ukraine, the impacts of such actions resulted in nationalist, environmental, and cultural movements. Sonevytsky and Ivakhiv consider one of these: musical avtentyka, which considered "authentic" village styles of traditional music. In particular, they are concerned with the unique a capella singing traditions in the area near Pripyat, Ukraine. The growth of avtentyka paralleled the rise of movements related to national identity, political sovereignty, environmental awareness, and the neo-traditionalist "Native Faith." In some cases, movements with divergent purposes coalesced around traditional music connecting ideas of place and nature. Sonevytsky and Ivakhiv support Titon's (2009) proposal for a sustainable ecology of music, and they do so with a unique emic source, one used by avtentyka supporters: Likhachev's "ecology of culture" (1985), which called for the preservation of human cultural production and its related parallels in nature. The impacts of the Chornobyl disaster still reverberate, particularly because nuclear disasters still happen (Phillips 2011). We are familiar with the use of music to express humanity, cohere groups, display identity, and achieve national ends; it should not, therefore, be surprising that environmental problems and related social movements, such as eco-nationalism (Dawson 1996), find similar places for music. Elsewhere in this volume, Pedelty and Mark make related arguments about musicking in the context of environmental and social problems. Historiographical considerations relate to those in Allen (and Edwards). Sonevytsky and Ivakhiv's use of cultural ecology provides a contrast to the scientific ecology of Boyle and Waterman. Sonevytsky and Ivakhiv's essay addresses the nature-culture debate, as do Dawe, Edwards, Feisst, Hui, Mark, Seeger, Simonett, and Windsor.

As we argue in the introduction, and as this volume demonstrates, ecomusicology is a field. But is working outside in *the* field as an ecologist or ethnographer necessary to ecomusicology? It may appear so, because fieldwork is common to all the essays of Part I and Part II, to at least two essays of Part III, and, to a lesser extent (through interviews if not the ethnographic fieldwork of participant-observation), to two of the essays of Part IV. Certainly, such a method of engagement with the world, one that has the author in its messiness rather than safely cloistered from it, results in sensitivity to and insight regarding issues ecomusicological (see Pedelty 2012). And certainly, the results of place-specific ethnographic research, particularly regarding non-Western ways of thinking, are powerful examples to help us understand, confront, and ameliorate the problem of culture central to the environmental crisis. But if we consider the importance of the ecological concept of strength in diversity, then fieldwork in particular places (ecological or ethnographic) alone would not be a pre-requisite for ecomusicology-as the remainder of this volume illustrates. Rather, we need numerous approaches and more collaborations: many ecomusicologies. And so even in the context of the common method of engagement in this section, we see a useful diversity of places, peoples, and approaches: from one of the worst environmental catastrophes ever (Chornobyl) to the problems of a slowly unraveling community (Hornby Island), from the Yoreme of semiarid northwestern Mexico to the Kīsêdjê of the Amazon basin's rainforests, and from Scotland to Uganda and the global guitar cultures on

which they are but select nodes. Fieldwork is an important direction in ecomusicology, and the sharing of knowledge learned through such work, be it cultural or ecological, is yet another of the paths that connects the field.

PART III: CRITICAL DIRECTIONS

The essays of this section take critical approaches from a diversity of academic disciplines. Connecting the essays—which consider sounds as diverse as crickets, transitcasting, advertisements, and pop music, and scholarly literature ranging from philosophy to psychology, from marketing to history, and from sociology to communication-are emphases on ethics and critique. Objective scholarship does not moralize; in texts of hagiographic praise and vitriolic complaint, moralizing fails to convince. Solid humanistic argument finds the necessary middle ground by marshaling evidence, displaying judgment, and formulating an argument. If ecomusicology is distinguished from a more simplistic study of music and nature (Titon 2013, Allen 2011) by taking a more critical approach, one that is self-reflective and/or theoretical and/or analytical and/or political, then all the essays in this volume should be "critical." But in grouping a few in this section, these essays provide emphasis on a critical element that connects with ethics. The essays of this section do share an approach with ecocriticism, particularly as explored in Part IV (although those essays focus more on texts and works). Although these essays may not emphasize place as much as the other essays in this volume, they still rely on situating us: from Japan (Edwards), Washington, D.C. (Hui), and Mexico (Pedelty), to Australia and the United States (Stimeling) and higher education in the United Kingdom (Windsor).

Edwards draws on critical theory to situate ecomusicology in this tradition (and as a "consciously critical acoustic ecology" in a much longer and more diffuse vein of thought); he also provides a framework for future ecomusicological inquiry. Drawing on the Frankfurt School, posthumanism, and neo-materialism, as well as his own expertise in Japanese aural culture, Edwards ultimately proposes a hybrid approach for ecomusicology, one that is informed by modernist and post-modernist thinking. Essentially, Edwards encourages us both to listen to our constructed binary worlds of nature and culture and, here connecting to ethics, to critique that singular world using reason yet still allow it to be a world worth wanting and keeping. Edwards' essay is perhaps the most obviously "critical" in the sense of relying on that wide-ranging body of humanistic and social-science thinking from disciplines such as literary studies, sociology, and philosophy that has come to be known as critical theory. The critical theorist interrogates the institutions, modes of production, and ways of thought that allow a society to carry on. As if that challenge to understand complex human societies were not enough, the ecocritical tradition faces the further challenge of engaging with the intertwined effects of humans in nature-that is, with the environmental crises caused by and impacting all societies. Further reading on the nexus of critical theory, music, and environment can be found most notably in Ingram (2010). Edwards' essay connects with numerous other essays in this volume, especially Titon (whose ideas on relational ontology and epistemology are important for Edwards) and the essays by Ingram (whose method is informed by some of the same ecocritical theories and whose essay could have easily been in this section as well); by Ingram, Simonett, Titon, and Von Glahn (who share an interest in place-based issues such as bioregionalism, dwelling, and topophilia); by Dawe (regarding materialism); by Drott (who is also interested in dissensus); and by Simonett and by Seeger (both of whom also critique Cartesian duality and engage with issues of ontology and

epistemology). Historiographical concerns also come up in Allen (and in Sonevytsky and Ivakhiv). Along with Edwards, Windsor critiques the music-noise/sound binary (along with Hui and Titon). Edwards' essay addresses the nature-culture debate, as do Dawe, Feisst, Hui, Mark, Seeger, Simonett, Sonevytsky and Ivakhiv, and Windsor.

Windsor brings ecological psychology into dialogue with ecomusicology and he uses these ideas-together with some critical theory, as in Edwards-to critique our notions of the ubiquitous and fluid binaries of nature-culture and noise-music. In Windsor's analysis, the assumptions underlying these binaries collapse because our understandings of those neat categories rely on the same processes of perception and action. The upshot, for Windsor, is an argument that is applicable for many teacher-scholars: the incorporation of improvisation in music curricula, which could be a corrective to mediated experiences and processes of enculturation that create nature-culture and noise-music binaries. This suggestion for pedagogical reform is in line with claims for teaching made in Allen (2011), and it is an ethical deployment of ecomusicological scholarship. Further reading on the ecological psychology approach to music can be found in Borgo (2007), Clarke (2005), and Windsor and de Bézenac (2012); Windsor's ideas regarding improvisation and jazz can be productively read in dialogue with Ingram (2010, 217-231) and issues of genre discussed in Pedelty (2012). Windsor's essay connects and contrasts with numerous other essays in this volume; the idea of ecology deployed in ecological psychology is in dialogue with the essays by Boyle and Waterman (especially regarding performance analysis), by Simonett (regarding perception), as well as those by Guyette and Post and by Titon. Improvisation is of interest also to Boyle and Waterman and to Titon. Windsor's essay addresses the nature-culture debate, as do Dawe, Edwards, Feisst, Hui, Mark, Seeger, Simonett, and Sonevytsky and Ivakhiv; furthermore, Edwards and, to a different extent, Hui and Titon offer varied critiques of the related binary of music-noise/sound.

Hui offers a fascinating look at the use of transitcasting: background music akin to Muzak on public transportation. As a historian of science who engages extensively with environmental history, Hui takes a critical approach to the understanding of the nature-culture divide; for her, nature is culture, especially given the extensive documentation of how humans have understood nature in different ways in different places at different times. The transitcasting case from the post-war United States is a moment in the changing American understanding of nature between the nineteenth and twentieth centuries, when sound became an increasingly important way for humans to relate to the environment, especially as urban development diminished otherwise natural spaces. Captive listeners on buses demanded aural rights akin to constitutional freedoms, and their complaints went all the way to the Supreme Court (although they were ultimately unsuccessful). Hui situates this case in the changing understandings of nature that, a few decades later, resulted in the rise of the field of environmental ethics, which sought to broaden philosophical inquiry to the non-human world. Such concerns with aural rights and ethics relate to humans' role as citizens who are part of a shared sound commons. Hui connects ecomusicology with environmental history and sound studies, areas in which most interesting further reading could take place: Coates (2005), Bijsterveld and Pinch (2011), Lanza (1994), and Sterne (1997). Elsewhere in this volume, Hui's essay connects especially well with Titon (whose discussion of Thoreau and concept of the sound commons are central for her) and with the essays by Allen, Guyette and Post, Simonett, and Titon (regarding soundscapes). Hui's essay addresses the nature-culture debate, as do Dawe, Edwards, Feisst, Mark, Seeger, Simonett, Sonevytsky and

Ivakhiv, and Windsor. Hui's discussion of environmental ethics, especially her engagement with a number of central texts (Leopold 2001, White 1967, Hardin 1968), resonates also with Mark's essay.

Stimeling focuses on energy companies' television advertisements. Stimeling's critical approach is to show how music abets advertisements' other features in a fundamentally un-ethical way: through greenwashing, or the practice of making false, vague, misleading, or exaggerated claims about the environmental benefits of a company. The music of these advertisements helps craft pro-environmental rhetoric, despite the features of the product that are primarily environmentally un-friendly. Energy companies with problematic environmental histories used these campaigns as appeals to particular demographics in order claim a sort of environmental stewardship. In particular, these corporations aim to reposition themselves by using musical notions of "progress" and "modernization" and by appealing to audiences interested in minimalism and indie rock. Stimeling connects musicological work on such genres (Fink 2005, Hibbett 2005), with innovative work on musical multimedia (Cook 1998) and social theory and cultural history (Taylor 2012). To that eclectic musicological background, he draws on research from marketing, psychology (Griskevicius et al. 2010), and environmental communication (Plec and Pettenger 2012). In relation to this last field in particular, and in relation to the examination of popular music, Stimeling is in dialogue with Pedelty's essay. Hui uses advertisements (radio and print) as primary sources, although with different emphases and for different reasons; nevertheless, both Hui and Stimeling find problematic ethical issues with regard to music/sound and advertisements.

Pedelty considers the power of music, but not in the glib way (with apologies to William Congreve) that "music soothes the savage breast." Rather, Pedelty considers the power of music as environmental communication. He does so by considering two pieces by popular musicians from Mexico: Maná's "Cuando los ángeles lloran" (1995) and Belinda's "Gaia" (2010), both of which have environmental themes that are, however, delivered and created in different contexts. The former involves political activism, while the latter is more superficial paean to the planet. In his critique, Pedelty finds ethical actions in Maná's arts activism. Belinda, on the other hand, is a more complex case: On the surface, "Gaia" belies her role as a pop star, but Pedelty finds the piece and her performing it praiseworthy in having had the courage to go against the grain and do it at all. Furthermore, ethical environmental communication is not just about the message sent or its rhetoric or the status of the messenger; ethical environmental communication is also to be judged by the receivers' contemplation of the message. Herein Pedelty's critique makes room for a negative evaluation of the pop medium (as an environmentally destructive and unsustainable global commodity), praise for the courage of the artist, admonishment regarding assumptions about the vacuousness of pop, and a lesson to be drawn from what others, in Mexico but also elsewhere, may make of the song. Both Maná and Belinda pave the way for other artists to invoke themes of sustainability, biodiversity, and environmental justice. While these artists are not the first to provide such lessons, Pedelty finds them unusual because of their sincerity and contexts in popular music. Pedelty's essay is productively read in conjunction with his ethnographically informed book on popular music and ecomusicology (Pedelty 2012), his upcoming book on environmentalist musicians, and related studies (Ingram 2008, Rosenthal 2006, Von Glan 2013). In this volume, Pedelty's context in Mexico dovetails with the other Latin American topical contributions of Simonet and Seeger. Pedelty is also in dialogue with the

decidedly un-ethical environmental communication strategies that Stimeling analyzes. Pedelty, Mark, and Sonevytsky and Ivakhiv address issues of activism and environmental justice. Feisst and Von Glahn deal with the issues of feminism and environmentalism that intersect with Pedelty's discussion of Belinda (see also, to a lesser extent, Allen's essay). Pedelty along with Drott, Feisst, and Von Glahn are the only authors in this volume who consider at length musical works by identifiable composers. Finally, Pedelty exhibits a complementary use of ecology that relates to the environment and networks (and as communication) yet is distinct from the science of the essays by Boyle and Waterman and by Guyette and Post.

In sum, the essays in this section join together in explicit critique: in examining the assumptions of popular music, advertisements, the commons, noise, education, listening, and of course music, nature, and culture. Moreover, these five authors are not critical for the sake of intellectual titillation, although their methodological issues, stories, and case studies are indeed quite interesting on their own; nor are they critical merely in the sense of leveling a judgment, pro or contra. Rather, they marshal their criticism for an altogether larger purpose: ethics, an agenda they share most prominently with the essays of Part I. In doing so, together the essays of this section highlight the critical, ethical, and even applied directions of ecomusicology.

PART IV: TEXTUAL DIRECTIONS

The essays in this part engage primarily with texts. These texts may be works of music by individual composers, as in Drott, Feisst, and Von Glahn (although none of the works on which they focus would be considered canonical). The texts may be those of folk music, which in Ingram's case happen to be both the scholarship on as well as the actual lyrics and music of traditional English songs (which are collected and transmitted, rather than composed). Or the texts may be writings in periodicals, as is the case with Allen. Linking all of these essays is engagement with the well-established textual practice of ecocriticism, which analyzes cultural products (such as poems, novels, commercials, films, music, etc.) that imagine and portray human-environment relationships (Garrard 2004, Glotfelty and Fromm 1996). Ingram is the only card-carrying ecocritic of the group, and he engages with a prominent ecocritical topic: the pastoral. Ecocritical writings help frame and theorize the essays by Drott (regarding postcolonial ecocriticism) and Allen (regarding ecological imagination, which scholars of environmental history also employ). Feisst and Von Glahn engage extensively with ecofeminism, a complex theoretical discourse with connections to ecocriticism and environmental philosophy. Furthermore, particular places and the idea of place is important for these essays (a common theme throughout the volume); most prominently, Von Glahn engages with bioregionalism, a place-based approach to organizing human society. Place and bioregionalism are major concerns in geography, environmental history, and of course, ecocriticism.

Ingram considers the issue of place with particular regard to concepts from cultural geography (topophilia) and from biology and evolutionary psychology (biophilia). As an example, he interprets the traditional English song "When Spring Comes In" as celebrating humans' affective bonds with the environment (topophilia; Tuan 1974) and innate affinity for nonhuman nature (biophilia; Wilson 1984, Kellert and Wilson 1993). Ingram critiques writings about traditional folk songs regarding the implications of the pastoral mode: For some Marxist writers, the pastoral in folk music was understood as an escape from urban, industrial society; but for some

ecocritics, the pastoral could be simultaneously a critique of current situations and an orientation toward a more sustainable, or even utopian, future. In English culture, such pastoral discourse is also part of the politics of nostalgia, which in the contemporary folk scene holds up such music as models for local, sustainable cultural production. Ingram's essay relates to a number of major trends in ecomusicology and ecocriticism. His own book (Ingram 2010), one of the most important texts in ecomusicology, offers interesting parallels with the pastoral in American music of the late twentieth century (see also Porter 1991 for context regarding the Anglophone debates about Cecil Sharp). The pastoral is a perennial topic in ecocriticism (Gifford 1999, James and Tew 2009), while geography is a topic that has regularly interested musicologists (Von Glahn 2003, Grimley 2006, 2011, Watkins 2011). Nostalgia is a topic that Rehding (2011) has advocated as a particular strength in ecomusicology. In this volume, Ingram's essay relates to those by Drott on the pastoral and on the "peasant" in opposition to modernity, and by Allen on the ecological imagination. Ingram's essay connects with Edwards regarding critical theory and with Titon regarding the pastoral and place; the latter topic is also of interest to Edwards, Simonett, and Von Glahn (regarding bioregionalism, dwelling, and topophilia). In discussing birds, Ingram's essay connects also with the other essays in this volume that include animal studies: Allen, Boyle and Waterman, Feisst, Guyette and Post, Seeger, Simonett, and Titon.

Drott brings postcolonial ecocriticism to bear on a single work, the Petite symphonie intuitive pour un paysage de printemps (1974) by Luc Ferrari. This tape piece makes use of newly composed quasi-minimalist music inspired by, together with recorded sounds and interviews from, the Causse Méjan, a plateau in south-central France. Central to Drott's interpretation are excerpts of interviews with local residents. The music and these texts allow for rather different views (dissensus) regarding the landscape: The visitor from the city has an aestheticized and appreciative "tourist gaze" (Urry 2011) that is in marked contrast to the rural inhabitants, who view the landscape practically rather than aesthetically. Ferrari's work is thus self-critical, and it shows how different social positions view landscape differently; as such, it allows listeners to have new, reflective, and complex environmental perspectives. Drott's approach is informed by postcolonial ecocriticism, which investigates the power relationships, inequalities, and material conditions in Western constructions of nature, particularly those imagined in the arts; in this regard, Drott is in dialogue with a community of ecocritics (Tiffin and Huggan 2009, DeLoughrey and Handley 2011). In addition to contextualizing his discussion in the history of France in general and the landscape of the Causse Méjan in particular, Drott also relates his analysis to debates of the "ecological Indian" in anthropology (Hames 2007). Grimley's studies of music and landscape (2006, 2011) are also a relevant intellectual context for Drott. In this volume, the acknowledgment of perspectives from others of lower status (the subalterns) in postcolonial ecocriticism situates it in relation to the essays by Edwards (who is also interested in dissensus) and Mark. Drott's essay connects with Ingram and Titon regarding ecocriticism and the pastoral, and with Feisst (and Mark) regarding the "tourist gaze."

Feisst chronicles the careers and discusses exemplary works of two composers who expressed environmental concerns, pioneered new music technologies, and succeeded in the maledominated field of composition. In their work, Maggi Payne and Laurie Speigel display and simultaneously challenge ideas of ecofeminism (a belief that the exploitation of the Earth and the domination of women are connected). Feisst's analyses of their careers, ideas, and works— Payne's desert-inspired audiovisual piece *Apparent Horizon* (1996) and Spiegel's mini opera about mice and a dog *Anon a Mouse* (2003)—question the conventional wisdom claimed in decades of ecofeminist writings that have viewed women as physiologically and psychologically closer to nature than men, and men as more strongly connected with culture and technology than women. Although neither Payne nor Spiegel considers herself an ecofeminist, their works express ecofeminist ideas. Feisst offers a unique perspective in the ongoing literature on gender and music (McClary 1991, Hinkle-Turner 2006) and on ecofeminism and environmental studies (Ortner 1974, Warren 2000, Merchant 2013). Elsewhere in this volume, Feisst shares an interest in the "tourist gaze" (Urry 2011) with Drott (a topic relevant also in Mark), and she uses a popular version of ecology in contrast to the definition advocated by Boyle and Waterman. Mice are a topic in the essays by Allen, Seeger, and Simonett (other animals are a topic as well in Boyle and Waterman, Guyette and Post, Ingram, and Titon). The issue of ecofeminism comes up in tangentially in Allen, more so in Pedelty, and especially in Von Glahn. Feisst's essay addresses the nature-culture debate, as do Dawe, Edwards, Hui, Mark, Seeger, Simonett, Sonevytsky and Ivakhiv, and Windsor.

Von Glahn focuses on the context, career, and work of Libby Larsen, whose political consciousness is connected to the ideas of bioregionalism (a belief that borders and boundaries should be drawn according to the physical environment rather than politics) and ecofeminism. Coming of age in the 1960s and 1970s, Larsen's context includes Vietnam War protest and the environmental and feminist movements, issues that coalesce in bioregionalism and ecofeminism. Although she originally refused to be labeled with such terms, Larsen eventually came to embrace them. Von Glahn makes the case, through considerations of Larsen's music and writings and through personal interviews with the composer, that bioregionalism and ecofeminism help us understand, contextualize, and feel Larsen's ideas as communicated in sound. Larsen does not preach with her music, so these concepts can be more powerful heuristics for understanding her music. Deep Summer Music (1982) is a case study, and through it and Larsen's writing about it, Von Glahn explores the issues of place, nature, and partnership-all of which are central to bioregionalism and ecofeminism. As with Feisst's essay in this volume (and to a lesser extent those by Allen and Pedelty), Von Glahn is in dialogue with an extensive literature on gender and music (McClary 1991, Hinkle-Turner 2006) and on ecofeminism and environmental studies (Ortner 1974, Warren 2000, Merchant 2013). For a coming together of ecofeminism and bioregionalism, see Plant (1990). The broader conversation on bioregionalism (Evanoff 2011) connects with the longstanding discussions of place frequent in environmental history (Hughes 2006), ecocriticism (cf. dwelling and pastoral in Garrard 2004), geography (Cresswell 2012, Tuan 1974), and of course ecomusicology (Von Glahn 2003, Grimley 2006, 2011, Watkins 2011, Pedelty 2012). Bioregionalism is a central idea with regard to place, a topic related to dwelling and topophilia and of interest also for Edwards, Ingram, Simonett, and Titon (as well as many others).

Allen considers a few years of writings from a late nineteenth-century Italian music periodical. Although such sources usually focus on opera, these writings engaged with soundscapes and connections between nature and music: from discussions of bird musicians to forest soundscapes, and from emotional appeals in stories to claims relying on Charles Darwin and composers such as Bellini. Allen makes three points about these sources: first, an analytic point is that the authors constitute an early ecomusicological community given the dialogue and recurring themes; second, an interpretive point is that their writings are an exercising of the ecological imagination to push opera in new directions; and third, a historiographical point is that we can understand our own ecomusicological efforts today as part of a longer intellectual history of engagements between music, culture, and nature. Allen's discussion of the idea of the environmental or ecological imagination puts his essay in dialogue with ecocriticism (Buell 1995, 2005), environmental history (Worster 1993), and ecomusicology (Guy 2009). Opera studies is a field rich for ecomusicological interpretation (see Senici 2005). In the Italian critics' discussions of birds and animals in relation to music, Allen makes connections with bioacousticians (Krause 2012) and historians of medieval music (Leach 2007), as well as numerous essays in this volume: Boyle and Waterman, Feisst, Guyette and Post, Ingram, Seeger, Simonett, and Titon. Allen's discussion of historiography is also relevant to Edwards and to Sonevytsky and Ivakhiv, while the ecological (or environmental) imagination is of interest to Ingram. And no discussion of soundscapes would be complete without mentioning the "father" of that field, R. Murray Schafer (1994), who is also discussed in the essays by Guyette and Post, Hui, Simonett, and Titon.

Through a common thread of ecocriticism, the textual directions here are connected especially to the critical directions explored in Part III. They share the use of varied methods of critique: from ecocriticism to environmental history, from ecofeminism to postcolonial ecocriticism, and from bioregionalism to topophilia. However, the essays here differ from those of Part III through the emphasis on musical works. Indeed, Pedelty engages with specific works, while Allen does not; but Pedelty emphasizes a critical approach on communication (process more than products), while Allen foregrounds an approach based on texts (products more than process). All of the essays here emphasize places, both specific and general. In sum, then, the textual directions of these essays highlight the ecocritical and geographical directions of ecomusicology.

NOTE ("Ecomusicologies")

1. The American Musicological Society's Ecocriticism Study Group was established in 2007, and the Society for Ethnomusicology's Ecomusicology Special Interest Group was established in 2011. The groups collaborate on the series of ecomusicologies conferences (http://www.ecomusicologies.org) and on a joint publication, the *Ecomusicology Newsletter* (http://www.ecomusicology.info/EN). See also the Ecomusicology Bibliography for further resources (http://www.ecomusicology.info/bib).

WORKS CITED

("Ecomusicologies")

Allen, Aaron S. 2012a. "Ecomusicology: Bridging the Sciences, Arts, and Humanities." In Environmental Leadership: A Reference Handbook, edited by Deborah Rigling Gallagher, 373–381. Thousand Oaks, CA: Sage Publications.

—. 2012b. "Ecomusicology: Music, Culture, Nature ... and Change in Environmental Studies?" *Journal of Environmental Studies and Sciences* 2 (2): 192–201.

- -. 2012c. "Fatto Di Fiemme': Stradivari's Violins and the Musical Trees of the Paneveggio." In *Invaluable Trees: Cultures of Nature, 1660–1830*, edited by Laura Auricchio, Elizabeth Heckendorn Cook, and Giulia Pacini, 301–315. Oxford: Voltaire Foundation.
- ——. 2014. "Ecomusicology." *The Grove Dictionary of American Music*. New York: Oxford University Press.
- Allen, Aaron S., Daniel M. Grimley, Alexander Rehding, Denise Von Glahn, and Holly Watkins. 2011. "Colloquy: Ecomusicology." *Journal of the American Musicological Society* 64 (2): 391–424.
- Allen, Aaron S., Jeff Todd Titon, and Denise Von Glahn. 2014. "Sustainability and Sound: Ecomusicology Inside and Outside the University." *Music and Politics* 8 (2): <u>http://dx.doi.org/10.3998/mp.9460447.0008.205</u>.

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

——. 1979. *Mind and Nature: A Necessary Unity*. New York: Dutton.

Bergeron, Katherine, and Philip Vilas Bohlman, ed. 1992. *Disciplining Music: Musicology and Its Canons*. Chicago: University of Chicago Press.

Brockman, John, ed. 1996. The Third Culture. New York: Simon and Schuster.

- Callicott, J. Baird. 1994. "The Wilderness Idea Revisited: A Sustainable Development Alternative." In *Ecological Prospects: Scientific, Religious, and Aesthetic Perspectives*, edited by Christopher K. Chapple, 37–63. Albany: SUNY Press.
- Coates, Peter A. 1998. *Nature: Western Attitudes Since Ancient Times*. Berkeley: University of California Press.
- Conway, Jill K., Kenneth Keniston, and Leo Marx. 1999. *Earth, Air, Fire, Water: Humanistic Studies of the Environment*. Amherst: University of Massachusetts Press.
- Cowan, Jane K. 1990. *Dance and the Body Politic in Northern Greece*. Princeton: Princeton University Press.
- Dawe, Kevin. 2007. Music and Musicians in Crete: Performance and Ethnography in a Mediterranean Island Society. Lanham, MD: Scarecrow Press.
- Eisley, Loren. 1969. The Unexpected Universe. New York: Harcourt, Brace and World.
- Feisst, Sabine. 2012. "Music as Place, Place as Music: The Sonic Geography of John Luther Adams." In *The Farthest Place: The Music of John Luther Adams*, edited by Bernd Herzogenrath, 23–47. Lebanon, NH: University Press of New England.

Feld, Steven. 1993. "From Ethnomusicology to Echo-Muse-Ecology: Reading R. Murray Schafer in the Papua New Guinea Rainforest." *The Soundscape Newsletter* 8: 9–13.

———. 2012. Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kaluli Expression. Durham: Duke University Press. Original edition, 1982.

- Foucault, Michel. 1977. *Discipline and Punish: The Birth of the Prison*. New York: Pantheon Books.
- Gardiner, William. 1832. *The Music of Nature*. Boston: O. Ditson. Reprint, Cambridge: Cambridge University Press, 2009.
- Garrard, Greg. 2004. Ecocriticism. New York: Routledge.
- Glotfelty, Cheryll, and Harold Fromm, ed. 1996. *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: University of Georgia Press.
- Grimley, Daniel M. 2006. *Grieg: Music, Landscape and Norwegian Identity*. Woodbridge: Boydell Press.
- Guy, Nancy. 2009. "Flowing Down Taiwan's Tamsui River: Towards an Ecomusicology of the Environmental Imagination." *Ethnomusicology* 53 (2): 218–248.
- Herzfeld, Michael. 1985. *The Poetics of Manhood: Contest and Identity in a Cretan Mountain Village*. Princeton: Princeton University Press.
- Hinchliffe, Steve. 2007. *Geographies of Nature: Societies, Environments, Ecologies*. London: Sage Publications.
- Hyland, Ken. 2011. "Academic Discourse." In *Continuum Companion to Discourse Analysis*, edited by Ken Hyland and Brian Paltridge, 171–184. London: Continuum.
- Ingram, David. 2010. The Jukebox in the Garden: Ecocriticism and American Popular Music Since 1960. Amsterdam: Rodopi.
- ——, ed. 2011. "Eco-Musicology." Special issue, Green Letters: Studies in Ecocriticism 15.
- Järviluoma, Helmi, Kytö Meri, Barry Truax, Heikki Uimonen, Noora Vikman, and R. Murray Schafer, eds. 2009. *Acoustic Environments in Change & Five Village Soundscapes*. Joensuu, Finland: Tampereen ammattikorkeakoulu.
- Kinnear, Tyler, ed. 2014. "Sound, Environment, and Action." Special issue, *Music and Politics* 8 (2).

- Krause, Bernard. 1998. Into a Wild Sanctuary: A Life in Music & Natural Sound. Berkeley, CA: Heyday Books.
 - ——. 2000. *Wild Soundscapes in the National Parks: An Educational Program Guide to Listening and Recording.* Washington, D.C.: U.S. Deptartment of the Interior, National Park Service.
- ———. 2002. *Wild Soundscapes: Discovering the Voice of the Natural World*. Berkeley, CA: Wilderness Press.
- Leach, Elizabeth Eva. 2007. *Sung Birds: Music, Nature, and Poetry in the Later Middle Ages.* Ithaca: Cornell University Press.
- Mark, Andrew. 2014. "Refining Uranium: Bob Wiseman's Ecomusicological Puppetry." *Environmental Humanities* 4: 69–93.
- Morris, Mitchell. 1998. "Ecotopian Sounds; Or, The Music of John Luther Adams and Strong Environmentalism." In Crosscurrents and Counterpoints: Offerings in Honor of Berngt Hambraeus at 70, edited by P. F. Broman, N. A. Engebretnen, and B. Alphonce, 129–41. Goetenberg: University of Sweden Press.
- Murray, Penelope, and Peter Wilson, eds. 2004. *Music and the Muses: The Culture of "Mousike" in the Classical Athenian City*. New York: Oxford University Press.
- Naess, Arne, and David Rothenberg. 1989. *Ecology, Community, and Lifestyle: Outline of an Ecosophy*. New York: Cambridge University Press.
- Nettl, Bruno. 1983. *The Study of Ethnomusicology: Twenty-Nine Issues and Concepts*. Urbana: University of Illinois Press.
- ———. 2005. *The Study of Ethnomusicology: Thirty-One Issues and Concepts*. Urbana: University of Illinois Press.
- Pedelty, Mark. 2012. *Ecomusicology: Rock, Folk, and the Environment*. Philadelphia: Temple University Press.
- Rehding, Alexander. 2002. "Eco-musicology." *Journal of the Royal Musical Association* 127 (2): 305–320.
- Rothenberg, David. 2002. Sudden Music: Improvisation, Sound, Nature. Athens: University of Georgia Press.
- Rothenberg, David, and Marta Ulvaeus, ed. 2001. *The Book of Music and Nature: An Anthology of Sounds, Words, Thoughts.* Middletown: Wesleyan University Press.

- Schafer, R. Murray. 1969. *The New Soundscape: A Handbook for the Modern Music Teacher*. Toronto: Clark and Cruickshank.
- ———. 1994. The Soundscape: Our Sonic Environment and the Tuning of the World. Rochester, VT: Destiny Books. Original edition, 1977. Schama, Simon. 1995. Landscape and Memory. New York: Knopf.
- Sebeok, Thomas A. 1977. How Animals Communicate. Bloomington: Indiana University Press.
- Snow, C. P. 1959. *The Two Cultures and the Scientific Revolution*. New York: Cambridge University Press.
- ———. 1965. "The Two Cultures." In *The Open Form: Essays for Our Time*, edited by Alfred Kazin, 2nd ed., 36–49. New York: Harcourt, Brace and World.

Soper, Kate. 1998. What Is Nature?: Culture, Politics, and the Non-Human. Oxford: Blackwell.

Soulé, Michael E. 1985. "What Is Conservation Biology?" Bioscience 35 (11): 727-34.

Titon, Jeff Todd, ed. 2009. "Music and Sustainability." Special issue, the world of music 51 (1).

. 2013. "The Nature of Ecomusicology." *Música e Cultura* 8 (1): 8–18.

Toliver, Brooks. 2004. "Eco-ing in the Canyon: Ferde Grofé's Grand Canyon Suite and the Transformation of Wilderness." *Journal of the American Musicological Society* 57 (2): 325–367.

Troup, Malcolm, ed. 1972. Guildhall School of Music and Drama Review. London.

Von Glahn, Denise. 2003. *The Sounds of Place: Music and the American Cultural Landscape*. Boston: Northeastern University Press.

———. 2013. *Music and the Skillful Listener: American Women Compose the Natural World*. Bloomington: Indiana University Press.

- Williams, Raymond. 1985. *Keywords: A Vocabulary of Culture and Society*. New York: Oxford University Press. Original edition, 1976.
- Worcester, Donald. 1993. *The Wealth of Nature: Environmental History and the Ecological Imagination*. New York: Oxford University Press.

("Part I: Ecological Directions")

Allen, Aaron S. 2012a. "Ecomusicology: Bridging the Sciences, Arts, and Humanities." In Environmental Leadership: A Reference Handbook, edited by Deborah Rigling Gallagher, 2:373–81. Thousand Oaks, CA: Sage Publications.

- —. 2012b. "'Fatto di Fiemme': Stradivari and the Musical Trees of the Paneveggio." In *Invaluable Trees: Cultures of Nature, 1660–1830*, edited by Laura Auricchio, Elizabeth Heckendorn Cook and Giulia Pacini, 301–315. Oxford: Voltaire Foundation.
- ———. Forthcoming. "'A Stubbornly Persistent Illusion'? Climate Change and the North, Ecomusicology and Academic Discourse." In *Climate Change, Music, and Nature*, edited by Annette Kreutziger-Herr and Britta Sweers. Bloomington: Indiana University Press.
- Allen, Aaron S., Daniel M. Grimley, Alexander Rehding, Denise Von Glahn, and Holly Watkins. 2011. "Colloquy: Ecomusicology." *Journal of the American Musicological Society* 64 (2): 391–424.
- Allen, Aaron S., Jeff Todd Titon, and Denise Von Glahn. 2014. "Sustainability and Sound: Ecomusicology Inside and Outside the University." *Music and Politics* 8. <u>http://dx.doi.org/10.3998/mp.9460447.0008.205</u>.
- Barz, Gregory F., and Timothy J. Cooley, eds. 2008. *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology*, Second Edition. New York: Oxford University Press.
- Blacking, John. 1973. How Musical is Man? Seattle: University of Washington Press.
- Buell, Lawrence. 2005. The Future of Environmental Criticism. Oxford: Blackwell.
- Currier, Nathan. 2014. "Classical Music in the Anthropocene." *Ecomusicology Newsletter* 3 (1): 8–12, 30–51.
- Farina, Almo. 2014. *Soundscape Ecology: Principles, Patterns, Methods, and Applications*. Dordrecht, The Netherlands: Springer.
- Feld, Steven. 2012. Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kaluli Expression. Durham: Duke University Press. Original edition, 1982.

Fitch, W. Tecumseh. 2006. "The Biology and Evolution of Music: A Comparative Perspective." *Cognition* 100 (1): 173–215.

- Gray, Patricia M., Bernie Krause, Jelle Atema, Roger Payne, Carol Krumhansl, and Luis Baptista. 2001. "The Music of Nature and the Nature of Music." *Science* 291 (5501): 52–54.
- Grimley, Daniel M. 2006. *Grieg: Music, Landscape and Norwegian Identity*. Woodbridge: Boydell Press.

——. 2011. "Music, Landscape, Attunement: Listening to Sibelius's Tapiola." *Journal of the American Musicological Society* 64 (2): 394–98.

-. 2015. *Hearing Landscape Critically*. Accessed February 26, 2015. <u>http://hearinglandscapecritically.net/</u>.

- Holling, Crawford S. 1973. "Resilience and Stability of Ecological Systems." *Annual Review of Ecology and Systematics* 4: 1–23.
- Ingram, David. 2010. The Jukebox in the Garden: Ecocriticism and American Popular Music Since 1960. Amsterdam: Rodopi.
- Kagan, Jerome. 2009. The Three Cultures: Natural Sciences, Social Sciences, and the Humanities in the 21st Century. New York: Cambridge University Press.
- Keogh, Brent. 2013. "On the Limitations of Music Ecology." *Journal of Music Research Online* 4: 1–10.
- Kroodsma, D. E., and E. H. Miller, eds. 1996. *Ecology and Evolution of Acoustic Communication in Birds*. Ithaca, NY: Comstock Books.
- Lindner, David, ed. 2004. *The Didgeridoo Phenomenon from Ancient Times to the Modern Age*. Schönau, Germany: Traumzeit Verlag.
- Marler, Peter, and Hans Willem Slabbekoorn, eds. 2004. *Nature's Music: The Science of Birdsong*. Boston: Elsevier Academic.
- Perlman, Marc. 2012. "Ecology and Ethno/musicology: The Metaphorical, the Representational, and the Literal." *Ecomusicology Newsletter* 1 (2): 1, 15–21.
- Pijanowski, Bryan C., Luis J. Villanueva-Rivera, Sarah L. Dumyahn, Almo Farina, Bernie L. Krause, Brian M. Napoletano, Stuart H. Gage, and Nadia Pieretti. 2011. "Soundscape Ecology: The Science of Sound in the Landscape." *Bioscience* 61 (March): 203–16.
- Rehding, Alexander. 2002. "Eco-musicology." *Journal of the Royal Musical Association* 127 (2): 305–320.
- Rozelle, Leo. 2006. Ecosublime. Tuscaloosa: University of Alabama Press.
- Schafer, R. Murray. 1994. *The Soundscape: Our Sonic Environment and the Tuning of the World*. Rochester, VT: Destiny Books. Original edition, 1977.
- Snow, C. P. 1959. *The Two Cultures and the Scientific Revolution*. New York: Cambridge University Press.
- Sorce Keller, Marcello. 2012. "Zoomusicology and Ethnomusicology: A Marriage to Celebrate in Heaven." *Yearbook for Traditional Music* 44: 166–183.

Soulé, Michael E. 1985. "What Is Conservation Biology?" Bioscience 35 (11): 727–34.

- Titon, Jeff Todd. 2009. "Economy, Ecology, and Music: An Introduction." *the world of music* 51 (1): 5–15.
- ———. 2012. "A Sound Commons for All Living Creatures." *Smithsonian Folkways Magazine* Fall/Winter.
- ———. 2013. "The Nature of Ecomusicology." *Música e Cultura* 8: 8–18.

———. Forthcoming. "Thoreau's Ear." *Sound Studies* 1 (1).

Toliver, Brooks. 2004. "Eco-Ing in the Canyon: Ferde Grofé's Grand Canyon Suite and the Transformation of Wilderness." *Journal of the American Musicological Society* 57 (2): 325–67.

Urry, John. 2011. Climate Change and Society. Cambridge: Polity Press.

- Wallin, Nils L. 1991. *Biomusicology: Neurophysiological, Neuropsychological and Evolutionary Perspectives on the Origins and Purposes of Music.* Stuyvesant, NY: Pendragon Press.
- Zolli, Andrew, and Ann Marie Healy. 2012. *Resilience: Why Things Bounce Back*. New York: Free Press.

("Part II: Fieldwork Directions")

Allen, Aaron S. 2011. "Ecomusicology: Ecocriticism and Musicology." *Journal of the American Musicological Society* 64 (2): 391–94.

——. 2012. "'Fatto di Fiemme': Stradivari's Violins and the Musical Trees of the Paneveggio." In *Invaluable Trees: Cultures of Nature, 1660–1830*, edited by Laura Auricchio, Elizabeth Heckendorn Cook, and Giulia Pacini, 301–315. Oxford: Voltaire Foundation.

- Bates, Eliot. 2012. "The Social Life of Musical Instruments." *Ethnomusicology* 56 (3): 363–395.
- Bateson, Gregory. 1972. Steps to an Ecology of Mind. New York: Ballantine Books.
- Bennett, Jane. 2010. Vibrant Matter: A Political Ecology of Things. Durham: Duke University Press.
- Brabec de Mori, Bernd, and Anthony Seeger. 2014. "Introduction: Considering Music, Humans, and Non-humans." In "The Human and Non-Human in Music: Listening to the Indigenous Peoples of Lowland South America," edited by Bernd Brabec de Mori. Special issue, *Ethnomusicology Forum* 22 (3): 269–286.

Dawe, Kevin, ed. 2004. Island Musics. New York: Berg.

- —. 2010. *The New Guitarscape in Critical Theory, Cultural Practice and Musical Performance*. Burlington, VT: Ashgate.
- Dawson, Jane I. 1996. *Eco-Nationalism: Anti-nuclear Activism and National Identity in Russia, Lithania, and Ukraine*. Durham: Duke University Press.
- Descola, Philippe, and Gísli Pálsson, eds. 1996. *Nature and Society: Anthropological Perspectives*. London: Routledge.
- Evernden, Neil. 1993. *The Natural Alien: Humankind and Environment*. Toronto: University of Toronto Press.
- Grimley, Daniel M. 2011. "Music, Landscape, Attunement: Listening to Sibelius's Tapiola." Journal of the American Musicological Society 64 (2): 394–398.
- Heidegger, Martin. 1971. Poetry, Language, Thought. New York: Harper Colophon Books.
- Ingold, Tim. 2011. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. London: Routledge. Original edition, 2000.

——. 2012. "Toward an Ecology of Materials." Annual Review of Anthropology 41: 427–42.

- Keil, Charles, and Steven Feld. 1994. *Music Grooves: Essays and Dialogues*. Chicago: University of Chicago Press.
- Leopold, Aldo. 2001. A Sand County Almanac. New York: Oxford University Press. Original edition, 1949.
- Likhachev, Dmitry S. 1985. Ecologiia kul'tury. Moscow: Nauka.
- Livingston, John. 2007. The John A. Livingston Reader. Toronto: McClelland and Steward Ltd.
- Martinelli, Dario. 2008. "Introduction (To the Issue and to Zoomusicology)." *TRANS-Transcultural Music Review* 12. Accessed December 8, 2010. <u>http://www.sibetrans.com/trans/trans12/art08.htm</u>.
- ———. 2009. *Of Birds, Whales, and Other Musicians: An Introduction to Zoomusicology.* Scranton: University of Scranton Press.
- McDonough, William, and Michael Braungart. 2002. Cradle to Cradle: Remaking the Way We Make Things. New York: North Point Press.

- Pedelty, Mark. 2012. *Ecomusicology: Rock, Folk, and the Environment*. Philadelphia: Temple University Press.
- Phillips, Sarah D. 2011. "Chornobyl Forever." In *Somatosphere: Science, Medicine and Anthropology*. Accessed March 5, 2015. <u>http://somatosphere.net/2011/04/Chernobyl-forever.html</u>.
- Ramnarine, Tina. 2009. "Acoustemology, Indigeneity and Joik in Valkeapää's Symphonic Activism: Views from Europe's Arctic Fringes for Environmental Ethnomusicology." *Ethnomusicology* 53 (2): 187–217.
- Roseman, Marina. 1998. "Singers of the Landscape: Song, History and Property Rights in the Malaysian Rain Forest." *American Anthropologist* 100 (1): 106–121.
- Seeger, Anthony. 1981. Nature and Society in Central Brazil: The Suyá Indians of Mato Grosso. Cambridge: Harvard University Press.
- ———. 2004. *Why Suyá Sing: A Musical Anthropology of an Amazonian People*. Urbana: University of Illinois Press. Original edition, 1987.
- Simonett, Helena. 2014. "Envisioned, Ensounded, Enacted: Sacred Ecology and Indigenous Musical Experience in Yoreme Ceremonies of Northwest Mexico." *Ethnomusicology* 58 (1): 110–132.
- Small, Christopher. 1998. *Musicking: The Meanings of Performing and Listening*. Middletown: Wesleyan University Press.
- Smith, Linda Tuhiwai. 1999. *Decolonizing Methodologies: Research and Indigenous Peoples*. New York: Zed Books.
- Sorce Keller, Marcelo. 2012. "Zoomusicology and Ethnomusicology: A Marriage to Celebrate in Heaven." Yearbook for Traditional Music 44: 166–183.
- Tilley, Christopher. 1994. A Phenomenology of Landscapes: Places, Paths, Monuments. Oxford: Oxford University Press.
- Titon, Jeff Todd. 2009. "Music and Sustainability: An Ecological Viewpoint." *the world of music* 51 (1): 119–37.
- ———. 2013. "The Nature of Ecomusicology." Música e Cultura 8 (1): 8–18.
- Turino, Thomas. 2008. *Music as Social Life: The Politics of Participation*. Chicago: University of Chicago Press.

Viveiros de Castro, Eduardo B. 2004. "Perspectival Anthropology and the Method of Controlled Equivocation." *Tipití: Journal of the Society for the Anthropology of Lowland South America* 2 (1): 3–21.

("Part III: Critical Directions")

- Allen, Aaron S. 2011. "Prospects and Problems for Ecomusicology in Confronting a Crisis of Culture." *Journal of the American Musicological Society* 64 (2): 414–24.
- Bijsterveld, Karin, and Trevor Pinch, eds. 2011. *The Oxford Handbook of Sound Studies*. New York: Oxford University Press.
- Borgo, David. 2007. "Free Jazz in the Classroom: An Ecological Approach to Music Education." Jazz Perspectives 1 (1): 61–88.
- Clarke, Eric F. 2005. *Ways of Listening: An Ecological Approach to the Perception of Musical Meaning*. Oxford: Oxford University Press.
- Coates, Peter A. 2005. "The Strange Stillness of the Past: Toward an Environmental History of Sound and Noise." *Environmental History* 10 (4): 636–65.
- Cook, Nicholas. 1998. Analysing Musical Multimedia. Oxford: Clarendon Press.
- Fink, Robert. 2005. *Repeating Ourselves: American Minimal Music as Cultural Practice*. Berkeley: University of California Press.
- Griskevicius, Vladas, Joshua M. Tybur, and Bram Van den Bergh. 2010. "Going Green to Be Seen: Status, Reputation, and Conspicuous Conservation." *Journal of Personality and Social Psychology* 98 (3): 392–404.
- Hardin, Garrett. 1968. "The Tragedy of the Commons." Science 162: 1243–1248.
- Hibbett, Ryan. 2005. "What Is Indie Rock?" Popular Music and Society 28 (1): 55-77.
- Ingram, David. 2008. "'My Dirty Stream': Pete Seeger, American Folk Music, and Environmental Protest." *Popular Music and Society* 31 (1): 21–36.
- ———. 2010. The Jukebox in the Garden: Ecocriticism and American Popular Music Since 1960. Amsterdam: Rodopi.
- Lanza, Joseph. 1994. Elevator Music: A Surreal History of Muzak, Easy-Listening, and Other Moodsong. New York: St. Martin's Press.
- Leopold, Aldo. 2001. *A Sand County Almanac*. New York: Oxford University Press. Original edition, 1949.

- Pedelty, Mark. 2012. *Ecomusicology: Rock, Folk, and the Environment*. Philadelphia: Temple University Press.
- Plec, Emily, and Mary Pettenger. 2012. "Greenwashing Consumption: The Didactic Framing of ExxonMobil's Energy Solutions" *Environmental Communication: A Journal of Nature* and Culture 6 (4): 459–476.
- Rosenthal, Debra J. 2006. "Hoods and the Woods: Rap Music as Environmental Literature." *Journal of Popular Culture* 39 (4): 661–676.
- Sterne, Jonathan. 1997. "Sounds like the Mall of America: Programmed Music and the Architectonics of Commercial Space." *Ethnomusicology* 41 (1): 22–50.
- Taylor, Timothy. 2012. The Sounds of Capitalism: Advertising, Music, and the Conquest of Culture. Chicago: University of Chicago Press.
- Titon, Jeff Todd. 2013. "The Nature of Ecomusicology." Música e Cultura 8 (1): 8–18.
- Von Glahn, Denise. 2013. Music and the Skillful Listener: American Women Compose the Natural World. Bloomington: Indiana University Press.

White, Lynn. 1967. "The Historical Roots of Our Ecologic Crisis." Science 155: 1203–1207.

Windsor, W. Luke, and Christophe de Bézenac. 2012. "Music and Affordances." *Musicae Scientiae* 16: 102–120.

("Part IV: Textual Directions")

- Buell, Lawrence. 1995. The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture. Cambridge: Harvard University Press.
- ———. 2005. The Future of Environmental Criticism: Environmental Crisis and Literary Imagination. Malden, MA: Blackwell Publishers.

Cresswell, Tim. 2012. Geographic Thought: A Critical Introduction. Chicester: Wiley.

- DeLoughrey, Elizabeth, and George Handley. 2011. *Postcolonial Ecologies*. Oxford: Oxford University Press.
- Evanoff, Richard. 2011. Bioregionalism and Global Ethics: A Transactional Approach to Achieving Ecological Sustainability, Social Justice, and Human Well-being. London: Routledge.

Garrard, Greg. 2004. Ecocriticism. New York: Routledge.

Gifford, Terry. 1999. Pastoral. New York: Routledge.

- Glotfelty, Cheryll, and Harold Fromm, eds. 1996. *The Ecocriticism Reader: Landmarks in Literary Ecology*. Athens: University of Georgia Press.
- Grimley, Daniel M. 2006. *Grieg: Music, Landscape and Norwegian Identity*. Woodbridge: Boydell Press.
- ———. 2011. "Music, Landscape, Attunement: Listening to Sibelius's Tapiola." *Journal of the American Musicological Society* 64 (2): 394–98.
- Guy, Nancy. 2009. "Flowing Down Taiwan's Tamsui River: Towards an Ecomusicology of the Environmental Imagination." *Ethnomusicology* 53 (2): 218–48.
- Hames, Raymond. 2007. "The Ecologically Noble Savage Debate." *Annual Review of Anthropology* 36: 177–190.
- Hinkle-Turner, Elizabeth. Women Composers and Music Technology in the United States: Crossing the Line. Aldershot: Ashgate, 2006.
- Hughes, J. Donald. 2006. What Is Environmental History? Cambridge: Polity. Ingram, David. 2010. The Jukebox in the Garden: Ecocriticism and American Popular Music Since 1960. Amsterdam: Rodopi.
- James, David, and Philip Tew, eds. 2009. New Versions of Pastoral: Post-Romantic, Modern, and Contemporary Responses to the Tradition. Madison Teaneck: Fairleigh Dickinson University Press.
- Kellert, Stephen R., and Edward O. Wilson. 1993. *The Biophilia Hypothesis*. Washington, D.C.: Island Press.
- Krause, Bernard L. 2012. The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places. New York: Little, Brown.
- Leach, Elizabeth Eva. 2007. *Sung Birds: Music, Nature, and Poetry in the Later Middle Ages.* Ithaca: Cornell University Press.
- McClary, Susan. 1991. *Feminine Endings: Music, Gender, and Sexuality*. Minneapolis: University of Minnesota Press.
- Merchant, Carolyn. 2013. *Reinventing Eden: The Fate of Nature in Western Culture*. Second edition. New York: Routledge.
- Ortner, Sherry. 1974. "Is Female to Male as Nature Is to Culture?" In *Woman, Culture, and Society*, edited by Michelle Rosaldo and Louise Lamphere, 68–87. Stanford: Stanford University Press.

- Pedelty, Mark. 2012. *Ecomusicology: Rock, Folk, and the Environment*. Philadelphia: Temple University Press.
- Plant, Judith. 1990. "Searching for Common Ground: Ecofeminism and Bioregionalism." In *Reweaving the World: The Emergence of Ecofeminism*, edited by Irene Diamond and Gloria Feman Orenstein, 155–61. San Francisco: Sierra Club Books.
- Porter, James. 1991. "Muddying the Crystal Spring: From Idealism and Realism to Marxism in the Study of English and American Song." In *Comparative Musicology and Anthropology of Music: Essays on the History of Ethnomusicology*, edited by Bruno Nettl and Philip V. Bohlman, 113–30. Chicago: University of Chicago Press.
- Rehding, Alexander. 2011. "Ecomusicology between Apocalypse and Nostalgia." *Journal of the American Musicological Society* 64 (2): 409–14.
- Schafer, R. Murray. 1994. The Soundscape: Our Sonic Environment and the Tuning of the World. Rochester, VT: Destiny Books. Original edition, 1977. Senici, Emanuele. 2005. Landscape and Gender in Italian Opera: The Alpine Virgin from Bellini to Puccini. New York: Cambridge University Press.
- Tiffin, Helen, and Graham Huggan. 2009. Postcolonial Ecocriticism: Literature, Amimals, Environment. London: Routledge.
- Tuan, Yi-Fu. 1974. Topophilia: A Study of Environmental Perception, Attitudes, and Values. Englewood Cliffs, NJ: Prentice-Hall.
- Urry, John. 2011. The Tourist Gaze 3.0. Thousand Oaks, CA: Sage.
- Von Glahn, Denise. 2003. *The Sounds of Place: Music and the American Cultural Landscape*. Boston: Northeastern University Press.
- Warren, Karen J. 2000. *Ecofeminist Philosophy: A Western Perspective on What it is and Why it Matters*. Lanham, MD: Rowman and Littlefield Publishers.
- Watkins, Holly. 2011. "Musical Ecologies of Place and Placelessness." *Journal of the American Musicological Society* 64 (2): 404–8.
- Wilson, Edward O. 1984. Biophilia. Cambridge: Harvard University Press.
- Worster, Donald. 1993. *The Wealth of Nature: Environmental History and the Ecological Imagination*. New York: Oxford University Press.