

A sequel to the two previous Sound in the Land conference volumes, *Sound in the Land – Music and the Environment* is a collection of essays, interviews, and poetry from the 2014 conference. Reflecting the unique interdisciplinary and international orientation of that event, this publication considers a wide array of subjects, including ecomusicology, soundscape aesthetics, ethnomusicology, silence, acoustic ecology, the natural environment, music theory, theology, hymnology, and ritual practices.

SECTION I The Silence of Stone: Perspectives of Sound

SECTION II Mennonite Soundscapes from Appalachia to Africa, Mexico to Canada

SECTION III Hearing the Natural World: Patterns, Pitches, Sounds

SECTION IV “Attending to the Sacred”: Ritual, Song, and Angel Wings

Sound in the Land – Music and the Environment is published as a special issue of *The Conrad Grebel Review*.



The Conrad Grebel Review
Volume 33, Number 2, Spring 2015

Sound in the Land Music and the Environment

EDITED BY
Carol Ann Weaver
Doreen Helen Klassen
Judith Klassen

The Conrad Grebel Review Sound in the Land

Vol. 33 No. 2 Spring 2015

The Conrad Grebel Review

<https://uwaterloo.ca/grebel/publications/conrad-grebel-review>

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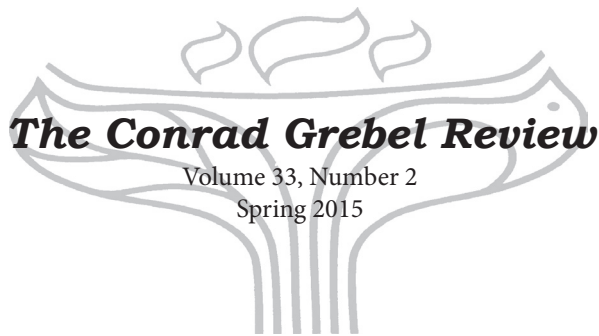
CGR is indexed in Religious & Theological Abstracts, EBSCOhost databases, and in the ATLA (American Theological Library Association) Religion Database. It is also included in the full-text ATLASerials (ATLAS) collection.

The Conrad Grebel Review is published three times a year in Winter, Spring, and Fall by Conrad Grebel University College, Waterloo, Ontario, Canada.

The Canadian subscription price (individuals) is \$34 + HST per year, \$88 + HST for three years. Back issues are available. Student subscriptions are \$27 + HST per year. Subscriptions, change of address notices, and other circulation inquiries should be sent to The Conrad Grebel Review, Conrad Grebel University College, Waterloo, ON N2L 3G6. 519-885-0220, ext. 24242; fax 519-885-0014; e-mail: cgreview@uwaterloo.ca. Remittances outside of Canada must be made in U.S. funds. Contact our office for subscription prices to the United States and overseas.

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ISSN 0829-044X



The Conrad Grebel Review

Volume 33, Number 2

Spring 2015

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Edited by Carol Ann Weaver, Doreen Helen Klassen, Judith Klassen

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SOUND IN THE LAND – MUSIC AND THE ENVIRONMENT

Introduction

Carol Ann Weaver

Sound in the Land – Music and the Environment, the festival/conference held in June 2014, was the first event to pair specific genres of music and musical performance with scholarship in varied fields of music, environmental sciences, and creative writing. Musical genres represented at the Waterloo, Ontario based event included contemporary classical—choral, orchestral, chamber, soundscape, multimedia—and jazz, folk, and traditional musics of Bali, Korea, and North America. Scholarly approaches came from fields as disparate as ecomusicology (music and the environment), soundscape construction, Mennonite and cultural studies, faith-based and ritual music studies, and several sciences.

As a sequel to Sound in the Lands 2009 (which explored Mennonite music across cultural and musical borders and boundaries), and Sound in the Land 2004 (which dealt with Mennonite musical styles and ethnic expressions); Sound in the Land 2014 was *both* a festival with multiple concerts, performances, and workshops *and* an academic conference with papers and presentations exploring sound and the environment from different perspectives, locally and globally.¹ As one composer-participant expressed it, “People from various disciplines and backgrounds were united to discuss and, most importantly, to experience sound and the land through which it resonates.”²

Keynote speakers for Sound in the Land 2014 were R. Murray Schafer, a world-renowned Canadian composer and founder of the World Forum

¹ *Sound in the Lands: Mennonite Music across Borders*, ed. Doreen Helen Klassen and Anna Janacek (Kitchener, ON: Pandora Press, 2011); *Sound in the Land: Essays on Mennonites and Music*, ed. Maureen Epp and Carol Ann Weaver (Kitchener, ON: Pandora Press, 2005).

² Evan Pointner, “Sound in the Land Report Back,” *Notations* (Canadian Music Centre), Winter 2015, 24.

for Acoustic Ecology (WFAE)³, and Gus Mills, a foremost South African carnivore researcher and writer. Internationally acclaimed Korean media artist Cecilia Kim presented her multi-media piece, *Earth Songs*, while other musicians, composers, and presenters from Germany, Switzerland, South Africa, the United States and Canada made their own valuable contributions to the program. Given that Sound in the Land 2014 connected with sonic ecology studies, one of the fastest growing, cutting-edge areas of musical study today, the conference was endorsed by WFAE.

This issue of *The Conrad Grebel Review* presents selected conference essays that help document the interdisciplinary nature of the emerging field of ecomusicology. When Al Gore, in *The Future: Six Drivers of Global Change*, observes that today's global civilization is "colliding with the natural world and causing grave harm to important natural systems on which our continued thriving as a species depends,"⁴ we are reminded that we are part of the earth's ecology and that our music is part of a wider global sound. Sound in the Land 2014 provided an understanding of the ecology of our planet, the music of our environment, and music and sound as partial indicators of our planet's health and well-being. At its core the conference sought to find Mennonite perspectives on all such matters. As attendee Wendalyn Bartley noted, the event served to "draw attention to the Mennonite legacy of the host college Conrad Grebel and its commitment to promoting nonviolence and justice. Expanding that perspective to include peace and balance for the earth makes this festival such a landmark event."⁵

While Sound in the Land 2014 involved settings with live music, soundscapes, sound walks, singing, worship, and workshops, this publication contains the academic papers and creative writing that best represent the event themes. The papers move from exploring the nature of sound and silence, to listening to sounds in global Mennonite contexts, to hearing sounds in the natural world, and conclude with works on sounds in ritual contexts.

³ World Forum for Acoustic Ecology: <http://wfae.proscenia.net>, accessed February 12, 2015.

⁴ Al Gore, *The Future: Six Drivers of Global Change* (New York: Random House, 2013), 281. Both this book and Gore's *An Inconvenient Truth* (New York: Rodale, 2006) directly influenced and inspired Sound in the Land 2014 – Music and the Environment.

⁵ Wendalyn Bartley, "Sound, Music and Nature's Song," *The WholeNote* 19, no. 9 (2014): 16.

* * * * *

Section I, *The Silence of Stone: Perspectives of Sound*, describes the origins, scope, and context for the 2014 event and contains essays that explain basic building blocks of sonic awareness. This section, taking its title from Rae Crossman's poem "The Searching Sings," uncovers how mysteries inherent in silence become *song*. Sonic artist Matthew Griffin's "Conversation with Carol Ann Weaver" provides historical background on previous Sound in the Land events as well as the 2014 offering. The interview focuses on the opening welcome, which included a composite conference soundscape; live music by Korean traditional players and Tilly Kooyman with dancer Dianne Chapatis; comments by biologist Gus Mills, Grebel President Susan Schultz Huxman, and WFAE President Eric Leonardson; and poetry by Cheryl Denise Miller.

My welcoming comments as organizer are presented in "Notes toward Silence," which explores notions of silence within human and environmental worlds. Keynote speaker and writer R. Murray Schafer, who coined the term "soundscape," provides an essay, "Sound Around," which asks probing practical and philosophical questions—both time-honored and strikingly new—about the nature and meaning of sound. German ecomusicologist Sabine Breitsameter examines the nature of soundscape, societal ways of listening, and the increasingly reduced diversity of urban sounds in "Ordering of Sounds: The Homogenization of Listening in the Age of Globalized Soundscapes." Both Breitsameter and Eric Leonardson acknowledge the primacy of Schafer's work. Leonardson's "Acoustic Ecology and Ethical Listening" cites Schafer as founder and leader of the World Soundscape Project and discusses the contributions of other prominent figures such as Hildegard Westerkamp, Barry Truax, and Bernie Krause. From their combined work, new ways of listening have emerged that are impacting sonic studies and the approach to environmental sound, internationally.

Section II, *Mennonite Soundscapes from Appalachia to Africa, Mexico to Canada*, is prefaced by an ode to blossoming redbuds by Indiana poet Ann Hostetler. The essays that follow travel to and from Africa, Mexico, the United States, and Canada, bringing new colors, contexts, and soundscapes within each setting. In "Appalachia to Africa and Back: A Mennonite Soundscape Remembered," Kathleen Kurtz describes unique ambient sounds from places where she has lived, creating a sonic journey deeply rooted in her

Mennonite past and present. In “Sounding Spaces: *Lange Wies*, Community, and Environment,” ethnomusicologist Judith Klassen explores sounds, sequences, and sonic meanings in High German hymn-singing as found in architectural spaces such as Old Colony Mennonite churches in Mexico. Further contextualization of cultural and religious values of certain Russian Mennonites (those who emigrated to North, Central, or South America from Holland via Ukraine) is presented as an innovative verbal soundscape in Canadian pianist Glenn Gould’s 1977 radio documentary, *The Quiet in the Land*. As discussed in Sabine Breitsameter’s “Ordering of Sounds,” this documentary demonstrated “contrapuntal radio” techniques, creating a kind of verbal fugue. In “‘What you intended to say’: Howard Dyck reflects on Glenn Gould’s *The Quiet in the Land*,” ethnomusicologist Doreen Helen Klassen explores the nature of this documentary by interviewing Dyck, who figures prominently as a ‘fugal subject’ within Gould’s work.

In “Listening to the Land through Rudy Wiebe’s Fiction,” Ann Hostetler explores literary allusions to both sound and the land in works by Canada’s leading Mennonite novelist. Virgil Martin focuses on an Ontario Mennonite soundscape from 1914 to the present in “Exploring the Changing Soundscapes of Waterloo County.” Poetically noting sonic changes in technologies, farming techniques, and cultural practices, he also describes changes in the natural environment throughout the last century, naming and describing typical bird and animal sounds and patterns. Also based in Ontario is poet-writer John Weier’s “Six Mennonite Stories; or, the Plough and the Poet; or, What the Skunk Said,” which rounds out this cultural polyphony with a touch of humor, narrative, fiction, and metaphor as he recalls growing up on a farm in the Niagara peninsula.

Section III, *Hearing the Natural World: Patterns, Prices, Sounds*, begins with a John Weier poem evoking the feeling and sound of an African desert. African cheetah and hyena specialist Gus Mills offers an in-depth sonic tour of the natural world in “Kalahari Soundscapes: The Functional Significance of Large Carnivore Vocalizations,” where lions, cheetahs, and hyenas become primary vocalists. Complementing that piece and explaining the human costs of doing wilderness studies, Margie Mills outlines beauties, pains, and joys in “The Price of Living with Nature.” She discusses life in Kalahari and Kruger wilderness areas and her work with Mozambican

women refugees. Natural patterns of birdsong are discussed in biologist Lyle Friesen's "Lust and Domain: The Nature of Birdsong," in which he focuses on musical variations, functional roles, and the process by which certain North American birds learn to sing. Composer-theorist Emily Doolittle concludes this section with an exhaustive study of pitch parameters of the musically fascinating Hermit Thrush in "Music Theory is For the Birds."

Section IV, "*Attending to the Sacred*": *Ritual, Song, and Angel Wings*,⁶ begins with phenomenological and scientifically-based speculations related to interspecies communications, before dealing with music in ritual, worship, and consciousness-raising settings within environmental rubrics. Ethnomusicologist Maisie Sum details how natural environmental sounds are captured in Balinese gamelan music in "Inspiration, Imitation, and Creation in the Music of Bali, Indonesia." Theologian Trevor Bechtel discusses sonic interaction between humans and animals, citing anecdotal evidence and scientific studies. He suggests that through attentiveness to such animal activities we may discover "a new reality of harmony between species." Environmental scholar Joanne Moyer, in "Let Earth Rest': A Consumption Sabbath Tent Revival Meeting to Inspire Simplicity and Environmental Action," describes the role of music and hymn singing at a pro-active environmental ritual that invited everyone in, regardless of ethnic or cultural background. For Moyer, hymns become part of a larger song for the earth and its healing, well-being, and splendor. In "Singing New Stories: Provoking the Decolonization of Mennonite Hymnals," social sciences professor Geraldine Balzer asks whether Mennonite hymns reflect Canadian geography or any aspects of indigenous Canadian, rather than European, culture. If words can become wordless, John Weier's poem "Blue Green Planet," the last element of this section, sings as a paean to our planet.

* * * * *

While we all have much to learn about the environment and are asking questions about how to address issues plaguing our beleaguered, beautiful

⁶ The first part of the title is derived from Hildegard Westerkamp's soundscape composition, "Attending to Sacred Matters," on *Into India: A Composers' Journey*, compact disk (Earsay 02002, 2002). "Angel Wings" is derived from John Weier's poem, "Blue Green Planet (12.4 Tablature)," which appears elsewhere in this issue of *The Conrad Grebel Review*.

planet, I hope the dialogues occurring at Sound in Land and presented here will continue to take us, along with our particular cultural and spiritual roots, outward to a wider global community where we can find ways to work together as a unified family for the good of this sacred earth, our home.

Carol Ann Weaver, composer, pianist, and Professor Emerita of Music at Conrad Grebel University College, Waterloo, Ontario, has created and directed three Sound in the Land festivals/conferences.

Acknowledgments

Sound in the Land – Music and the Environment, the festival/conference itself and the publication of essays in this issue of *The Conrad Grebel Review*, was made possible by generous support from Conrad Grebel University College, the Korea Foundation, *The Conrad Grebel Review*, the Marpeck Fund, Mennonite Foundation, Renison University College, the *Waterloo Region Record*, the Community Energy Development Co-operative, Music Plus, and individual donors. Conrad Grebel University College hosted and administered the event, and also provided substantial support through its Academic Development Fund, Music Department, and multiple staff contributions.

Organizers thank the World Forum for Acoustic Ecology and its President, Eric Leonardson, for endorsing the event and for encouraging us to produce a publication that can make a significant contribution to the rapidly growing field of acoustic ecology. We owe special thanks to Grebel President Susan Schultz Huxman and former Academic Dean James Pankratz for helping to secure funding and allocating college resources for the event and this publication. We thank the Sound in the Land planning group for their insight, energy, and collaborative work: Laura Gray, Maisie Sum, Mark Vuorinen, Ben Bolt-Martin, Fred Martin, Sara Cressman, Rebecca Gibbins, and Jennifer Konkle, all from Grebel, as well as Rae Crossman, Tilly Kooyman, Bryan Moyer Suderman, Nadia Mazzarolo, Ann Schultz, and Mike Erb from the larger community.

We are grateful to *Conrad Grebel Review* editor Jeremy Bergen for publishing the proceedings in an extended edition of the journal, and to managing editor Stephen Jones for copy editing. We also thank all the writers for their essays, poetry, and creative pieces, and the photographers for their excellent images. I reserve my largest personal thanks to co-editors Doreen Helen Klassen and Judith Klassen, who believed in this publication from the start and stayed with it to completion, helping to organize, refine, and clarify all the key components. It took more than a village to create Sound in the Land as a conference, and even more villages to produce this volume. I thank

all the workers, writers, performers, composers, attenders, funders, and now the readers, for enabling this sound to become yet more landed!

– *Carol Ann Weaver, Sound in the Land Coordinator, Artistic Director,
and Publication Co-editor*

SECTION I

The Silence of Stone: Perspectives of Sound

The Searching Sings

Rae Crossman

no bird song verb ever can be found
no cataract chant
no wind wail

no syllables as sibilant as reed whisper
no tumble of words into waves

what voice can rain

how can lungs thunder
mouths crack the trunk of a tree
how can lips make runnels
roar into rapids

who knows how to hum summer
like the cicada

who knows how to tongue
the notes of sleet

yet the howl of a wolf
will answer the howl of a man

loons on a lake
will cry when called

and the mountain return
the shout of its name

no bird song verb ever can be found
but in the searching
sings a resonant sound

and song is telling
what can't be told

song is awe made bold

song is blood flow
song is bone

song is the silence of stone

song is leap
between heart and bird

song is spirit heard

Rae Crossman, program director of "Waterloo Unlimited" at the University of Waterloo, writes poetry for the page and for oral performance. His collaborative projects include storytelling, choral compositions, and outdoor theatrical pieces.

Sound in the Land: A Conversation with Carol Ann Weaver

Matthew Griffin

Sound in the Land is a festival/conference held at Conrad Grebel University College that aims to find a meeting point between music, academia, environmentalism, activism, and faith.¹ It was founded in 2004 by composer, performer, and professor Carol Ann Weaver. The ambitious theme of the latest gathering, held in June 2014, was “Music and the Environment.” This event featured legendary Canadian composer and acoustic ecologist R. Murray Schafer as keynote presenter, and included performances, papers, and installations by musicians and academics from around the world. I was there for this iteration of the conference, and found its synthesis of traditional conference tropes with performativity, interactivity, and activism to be unique. Recently, I interviewed Weaver, now retired from the College, about the history of Sound in the Land, its legacy, and the challenges of bringing together such different elements under a single umbrella.—Matthew Griffin

MG: First of all, you’ve been doing Sound in the Land for a while. How has it evolved over the years?

CW: Sound in the Land, which evolved as a series of festival/conferences on Mennonites and music, began in 2004, with subsequent events in 2009 and 2014. Conrad Grebel University College has fully endorsed and supported each event, allowing it to become a full-fledged forum for the exploration of music, starting from a Mennonite perspective and travelling far beyond. Grants from the Social Sciences and Humanities Research Council, Waterloo Regional Arts Fund, the Marpeck Fund, and other foundations have also helped support these events.

With the exception of Mennofolk venues, which include a wide range of folk, jazz, and alternative styles, other Mennonite music festivals have

¹ This conversation with Carol Ann Weaver is an edited version of www.soundecology.ca/acoustic-ecology-2/sound-in-the-land-a-conversation-with-carol-ann-weaver. Used by permission of the Canadian Association of Sound Ecology.

usually tended towards choral and sacred music, with possibly a smattering of very topical ‘folk’ songs, all with a mission to be Mennonite-themed, and church-related.

However, Mennonites are a far broader group than those who may meet in churches on a Sunday morning. The broad category includes both “ethnic Mennonites” coming from so-called Mennonite roots and self-professed “confessional Mennonites,” those who may or may not come from Mennonite roots but who are very firm in their sense of Mennonite theology. When this group of people is brought together, new concepts, synergies, and interconnections can occur.

The sense of Sound in the Land has always been to begin with Mennonites and include all others who wish to come along. Traditionally, Mennonites have maintained a strong sense of cultural identity and have attempted to incorporate ideas of peace-making, justice, brother/sisterhood, community, and a responsible sense of connection with the land.

The 2004 Sound in the Land featured Mennonite ethnic/cultural musical expressions, with a solid listen to and look at Mennonite musical traditions ranging from Old Colony Mennonites in Mexico to “Russian” Mennonites (those who moved from Holland to Russia and then outward to Canada and elsewhere), to “Swiss” Mennonites (those who emanated from Switzerland but, after many persecutions, migrated to the US, Canada, and elsewhere).

What was unusual for that conference was that for the first time in history we were looking at/listening to Mennonite music via ethnomusicologists’ ears and eyes rather than through the grid of a “church music” perspective. Papers about cultural aspects of informal Mennonite music making, Mennonite folk music traditions, and Mennonite compositions of so-called “concert” music (rather than mere “worship” music) were featured.

It was essential that we create an event free from the hierarchy of classical over popular music, with all genres equally respected. We invited Mennonite-rooted composers, performers, poets, folk, jazz and alternative musicians. One attendee commented enthusiastically, “This festival really kicked ass.” The festival incorporated multiple styles and genres from a cappella singing to classical, jazz, and alternative styles, providing an open exploration as to what Mennonite music actually *is*. In the published book of collected conference writings, *Sound in the Land: Essays on Mennonites and Music*, Eric Friesen,

a Canadian Broadcasting Corporation (CBC) radio host, observed that “the triumph of this volume of essays is that it resists the trap of exclusivity and accepts the widest embrace of possibilities.”

Having created a large music drama, *Quietly Landed?*, for a 1995 Mennonite conference called “Quiet in the Land,” which explored whether Mennonite women were quiet or silenced, I considered it important to create a conference, some nine years later in 2004, which could finally address the “sounds” of Mennonite people—implying musical, cultural, and finally environmental sounds. Later, the 2009 Sound in the Lands festival/conference included both western and international music—choral, instrumental, folk, jazz, and various ethnic styles, especially African and Cuban. The publication of conference essays, *Sound in the Lands: Mennonite Music Across Borders*, featured music from North America, Cuba, Africa, Russia, the Middle East, and beyond.

So, these events were the foundations on which Sound in the Land 2014 – Music and the Environment has been created. It was initially imperative for us to begin to listen to our own voice(s) as a Mennonite-rooted people and, in Eric Friesen’s words, to accept “the widest embrace of possibilities,” before we could travel beyond. Having covered aspects of Mennonite ethnic/cultural music and certain international voices, we now included these ethnic and ethnomusicological roots, while embracing our sense of global music, as we began to explore our relationship to the earth.

MG: And this is your last time doing it, correct?

CW: At the time of the June 2014 event, I was not sure Sound in the Land could continue, in that I was planning to retire from Conrad Grebel on July 1, 2014. However, conversations about a next Sound in the Land are underway for 2017. College President Susan Schultz Huxman said to me, “Sound in the Land is Grebel’s. We need to continue it.” So, with the college seeing the importance and uniqueness of this festival, I have great confidence that Sound in the Land will indeed continue!

MG: This year’s iteration really felt like a culmination, in a way, and that’s coming from someone who hadn’t been involved before. Did it have a similar feeling for you?

CW: Yes, this year's festival felt like a culmination of my efforts to envision, craft, and lead a steering committee; seek funding; invite guests and presenters; coordinate musical, academic, and logistics details; commission composers and songwriters; write script for websites and press releases; and maintain a close connection with presenters, potential contributors, and college organizers. I felt this was my last chance to create and carry out such a conference. As well, nothing means more to me than our relationship to the Earth, so this event came the most deeply from my own heart and beliefs about relating who we are and what we do to the larger ecology of our planet.

MG: How do you imagine the legacy of the festival? How could it grow/change from here?

CW: It may embrace more of the peace aspects of Mennonites. As well, further conferences may want to address justice-related themes or global community themes, embrace minorities, or discuss the confluence of a peoplehood that has traveled light years beyond the 16th-century Anabaptists (early Mennonites) but still contains a distinctive "Mennonite" sensibility of critiquing social conventions, popular culture, and state institutions, and of living by a conscience that frees one from bondage to these limiting factors.

MG: I also need to ask about the welcome event. As I said to you at the time, it was unlike any beginning to a conference I'd ever been to. The integration of performances and happenings with more traditional introductions was tremendously refreshing. It had an almost movie-trailer-like quality to it. Was there a specific tone you were trying to strike for the conference? Would you say it reinforced the ideas behind the conference in general? If so, how? As a participant, I can certainly say it prepared me to think in a certain way and specifically to be prepared for the heterogeneous nature of the conference. That is to say, the integration of the environmental, the academic, the spiritual, the musical, etc.

CW: Yes, the intention of the conference welcome was to provide a blend of presentations that would represent different tangents of the festival/conference and leave attenders tantalized, wanting to hear more and see more. I have envisioned Sound in the Land as a tightly knit combination

of musical, sonic, aesthetic, environmental, scientific, cultural, poetic, dramatic and spiritual expressions, all speaking for the earth rather than for just us people. I was particularly happy to incorporate a Zimbabwean children's choir singing in celebration of carnivores; Korean "Earth Songs"; Murray Schafer-influenced music and dance; and words from South African scientific researcher Gus Mills, Grebel President Susan Shultz Huxman, and WFAE (World Forum for Acoustic Ecology) President Eric Leonardson. We saw the bicycles ridden by two persons from Winnipeg to Waterloo, heard colloquial Mennonite poetry about the Earth, and welcomed presenters from Germany, Switzerland, the US, Canada, Korea, and South Africa. I wanted the welcome to be as exciting and enticing for attenders as was the sheer planning and organizing for all of us coordinators. I wanted all of us to feel we are part of this mega event of listening to our earth.

MG: How do you feel about the integration of these disparate elements? Does it strike you as natural? Difficult? Problematic?

CW: I was thrilled by the integration of all these elements which, rather than feeling diffused, felt somehow organically connected, inevitable. As I heard one conference attendee casually remark: "Of course we have a dancer followed by a Korean drummer followed by an ecomusicologist followed by a cheetah specialist followed by a specialist in Old Colony music in Mexico. How else could we hear the earth?" The problems of bringing this range of interdisciplinary actors, academics, and movers and shakers together are the very problems we must face and resolve as we go on from here into the next years of our new century. No single group of us can solve the overwhelming environmental issues of our planet alone. The time for dissecting, compartmentalizing, and niche-ing is so 20th-century. We are into a new era of combining otherwise disparate factions and peoples in order to find a common whole, and to work as a global and local community to address the death-threatening environmental issues our planet faces if we want life as we know it to continue.

Matthew Griffin co-founded and co-directs the Electricity is Magic art gallery in Montreal, Quebec, and is treasurer of the Canadian Association of Sound Ecology.

Notes toward Silence: A Way of Hearing the Earth

Carol Ann Weaver

Silence, as such, does not exist—never has, not in our audible experience. Yet we cherish the metaphor of silence, continuing to hope and dream for its possible presence in our lives. Why? Because we yearn to come to the source of life, to the core of our own existence, bringing us to the beginning of sound, which from time immemorial has been referred to as *silence*. However, we often fear silence, filling our human interactive time with nonstop conversation and our private time with continuous media sound. As well, we often define silence negatively as the *absence* of various kinds of noises—whether intentional as in organized music, or human-made mechanical noises deemed polluting, unnecessary, and undesirable—rather than as the *presence* of a desired quality of life.

Silence can create some of the most powerful communication possible, whether inter-species or human to human. Many people cherish quality silent time spent with a domestic feline or canine. However, the silence of a large male grizzly, slowly rising on its hind legs to watch us hiking on a lonely Yukon mountain pass in Kluane National Park, deciding whether we are on the menu, can create a drama more powerful than words. Shared human silences too can seem almost endangered within our increasingly frenetic urban lifestyles. Tanzanian-born Annetta Miller, who has lived most of her life in East Africa, describes being with a Kikuyu friend: “We often sit in silence, she and I, soul to soul, spirit to spirit, a communication so easily found in Africa.” Such communication through silence is “too easily forgotten, too easily lost by [our] Western inability to be silent and listen,” Miller suggests.¹

Swedish novelist Henning Mankell, also having lived many years in Africa, expresses the same idea in *The White Lioness* through his character Kurt Wallender, whose African, Arabic, and South American acquaintances

¹ Annetta Miller, *Sharing Boundaries: Learning the Wisdom of Africa* (Nairobi, Kenya: Pauline Publications Africa, 2003), 15.

think that “not having time for a person, not being able to sit in silence with somebody [is] the same as rejecting them, as being scornful of them.”² And the ritualized silences experienced during a Buddhist temple festival in CheonAn, South Korea or within unprogrammed (silent) Quaker meetings,³ can be quite unnerving for those of us who may need to fill in gaps with speech, song, or programmed events.

There are various silences, including the silence of annihilation as detailed in Rachel Carson’s *Silent Spring*,⁴ the silence of anger, or the silencing of voices we would rather not hear. But here I wish to focus on the silence of beauty and purity from which life comes and goes. Nothing is more silent than the moment before the birth of a new baby, nor after the last breath of a living being. Though we may fear it, we are drawn to silence, which the 13th-century Persian mystic poet Rumi calls “the root of everything.”⁵ Elsewhere he suggests that “silence reveals more than language”⁶ and that “speech is a river; silence is an ocean.”⁷

How can we define silence *positively*? How can we hear it as a valued part of our existence, as an essential part of our interaction with all of life? If we discover its deeper meanings, are we closer to attaining it?

The natural sonic environment, which is free from human or human-engineered sounds—mechanical, motorized, industrial—is experienced by many people as *silence*. This sense of silence is derived from the actual *sounds* of the natural world unfolding: sound of birds, crickets, wild animals in natural habitats, wind funneling through mountain passes, tree branches creaking or breaking, thunder, rain, ice cracking on a frozen lake, trickle

² Henning Mankell, *The White Lioness* (New York: Vintage Books/Random House, 2003), 252.

³ Having attended such Quaker meetings in Indiana, Virginia, Michigan, Pennsylvania, Massachusetts, Manitoba, Ontario, South Africa, and Kenya, I initially found the intentional silence baffling before I was able to experience it as transformative.

⁴ Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962). This ground-breaking account of the detrimental effects of pesticides on birds and other life forms placed the world on high environmental alert, leading to the banning of DDT in North America.

⁵ Jalaluddin Rumi, *Hidden Music*, tr. Azima Melita Kolin and Maryam Mafi (London: Thorsons Publishing, 2009), <http://wahiduddin.net/dance/silence.htm>, accessed February 1, 2015.

⁶ Jalaluddin Rumi, *Rumi, the Big Red Book: The Great Masterpiece Celebrating Mystical Love and Friendship*, tr. Coleman Barks (New York: HarperCollins, 2011), 73.

⁷ Jalaluddin Rumi, *The Essential Rumi*, tr. Coleman Barks with John Moyne, A. J. Arberry and Reynold Nicholson (Edison, NJ: Castle Books, 1977), 198.

and torrent of water in a stream or waterfall, gurgle of water trapped in a whirlpool, sand sweeping along unbroken desert. Such sounds become an organically sonic expression of the natural world, which we hear as music stemming from silence. On listening to forest sounds at night, R. Murray Schafer asks, “Doesn’t the music really originate in nature and simply echo through us? Nature is the author and we are the echo—*not the other way around*. The music doesn’t belong to me, it belongs to the forest.”⁸ Similarly, Canadian soundscape artist Hildegard Westerkamp describes her time spent in the Zone of Silence in Mexico, a deserted natural area with an unusual landscape and a seeming hole in the magnetic field. By using sounds and words from the desert, she describes the soundscapes she created as “an attempt to recapture the experience of silence as well as the desire for soundmaking that this environment created in us.”⁹ Furthermore, in the words of musicologists Frédéric Duhaupas and Makis Solomo, Westerkamp’s richly environmental soundscapes work to “enhance a dialogue between . . . external sounds and our own ‘inner life’ . . . [showing] that the sounds of a quiet, peaceful forest environment offer us a space in which we can be rid of the restless sensations caused by urban acoustic environments . . . and allow us to adjust ourselves progressively to quiet surroundings.”¹⁰

As a routine part of teaching music composition, I have university students attend to this quietness and silence by going outdoors, listening to and making note of all audible sounds and silences, from which they then create a composition using instruments of their own design. This project is informed and inspired by the work of Schafer and Westerkamp.

In fact, many spiritual and meditational practices, including Zen Buddhism, Christian contemplative traditions derived from Judaic roots, mind-body healing, yoga, sonic meditation,¹¹ and others, begin with silence

⁸ Quoted in Jesse G. L. Stewart, *R. Murray Schafer and the Plot to Save the Planet: A Biographical Quest* (Toronto: Sunesis Productions, 2013), 242.

⁹ From Westerkamp’s notes and selected recordings on “Music from the Zone of Silence” (1988), www.sfu.ca/~westerka/program_notes/zonesilence.html, accessed September 11, 2014.

¹⁰ Frédéric Duhaupas and Makis Solomos, “Hildegard Westerkamp and the Ecology of Sound as Experience: Notes on Beneath the Forest Floor,” *Soundscape: The Journal of Acoustic Ecology* 13, no. 1 (Winter/Spring 2013-2014): 8.

¹¹ Sonic Meditation TM, developed by American composer Pauline Oliveros, begins with

as the basis for discovering one's soul, sensing the presence or voice of God, hearing one's intuition, and becoming one with the universe. The Hebraic Psalmist decrees "Be still, and know that I am God"¹² and asserts "for God alone my soul waits in silence."¹³ American composer John Luther Adams sums it up in these words: "Quantum physics has recently confirmed what shamans and mystics, poets and musicians have long known: the universe is more like music than like matter . . . [and by giving] attention to the fullness of the present moment, we listen for the breath of being, the voice of God."¹⁴ And as we begin to listen to this stillness, we not only begin to sense a world beyond our physical surroundings; we also begin to hear a plethora of audible sounds interacting with each other in multiple layers and rhythms, creating infinite textures, timings, and patterns more complex than any human-composed composition. Such richness of unbridled sound led American experimental composer John Cage to say, in response to a question I asked him, that "my favorite music is no music at all."¹⁵ In fact, in his thought-provoking classic *Silence*, which opened the doors for further work in sonic ecology, he describes his sense of music as "an affirmation of life . . . a way of waking up to the very life we're living, which is so excellent once one gets one's mind and one's desires out of its way and lets it act of its own accord."¹⁶

As well, any responsible ecological sensibility needs to take into account the notion, expressed by spiritual writer Thomas Moore, that the earth is our home and that our "care of the world is a tending to the soul that resides in nature as well as in human beings."¹⁷ Thus, listening to these silences within the natural world provides us with a direct entry into our own inner lives. After all, we are intrinsically *part* of that same "natural world."

silence out of which vocal sounds emerge. More background can be found in Pauline Oliveros, *Software for People* (Baltimore: Smith Publications, 1984), 138-40.

¹² Psalm 46:10, NRSV

¹³ Psalm 62:1, NRSV

¹⁴ John Luther Adams, as quoted by Gayle Young in "Sonic Geography of the Arctic: An Interview with John Luther Adams," *MUSICWORKS*, no. 70 (Spring 1998): 40.

¹⁵ From a Student Composition Seminar at Indiana University School of Music in 1972, where John Cage was guest composer.

¹⁶ John Cage, *Silence* (Cambridge, MA; London, UK: MIT Press, 1966), 12.

¹⁷ Thomas Moore, *Care of the Soul* (New York: Harper Perennial, 1994), 270-71.

From this context of listening to the earth, to the stillness and sounds emerging from the natural world, and to our interactive human sounds in relation to the earth, it is important for us to recognize our part within the earth's ecosystem, knowing that we have generously added our own noises—musical, spoken, mechanical, motorized, industrial—to the larger global soundscape. Musically, we have done so in splendid and magnificent ways since the beginning of human history, from birth wails to requiem masses, from circle dances to symphonies. But it is essential that we listen *beyond* our human spectrum, to the natural world lying about us, some of which may soon disappear if we listen *only* to human-made sounds.

Listening to the natural world has become increasingly challenged. Note the ear-budded bike rider, musak-ed interiors, ubiquitous machine sounds, constant indoor air circulation noises, and windows closed to the morning birds. Even within forests or other natural areas, we frequently resort to loud and vivid conversation rather than listen quietly to our surroundings. Those spiritual disciplines requiring silence have much to teach the larger world.

As well, there was a time when we believed we had more important things to do than to listen to or look after the welfare of the cheetah, the Cerulean Warbler, or the rhino. But times have changed, and we are running out of time. Either we do all we can to listen to their voices, help maintain their lives, and celebrate their existence on this beautiful but fragile planet, or they may go like the dinosaur, leaving us to remain with the mosquitoes, ticks, and cockroaches.¹⁸

It is predicted that earth's human population will reach nine billion by mid-21st century, and that most of the growth will occur in developing countries, with some 70 percent of people living in urban areas.¹⁹ Environmental writer and activist Al Gore is but one of many writers noting that "human civilization is colliding with the natural world" and that some 20 to 50 species may become extinct by mid-century.²⁰ Further work by Jurriaan

¹⁸ Scientists speculate that cockroaches, preceding us by millennia, will also survive us by at least that long: <http://wonderopolis.org/wonder/could-a-cockroach-survive-a-nuclear-war>, accessed Jan. 11, 2015, and that ticks and mosquitoes continue to resist many insecticides (see Carson, *Silent Spring*, 270, 271.)

¹⁹ Al Gore, *The Future* (New York: Random House, 2013), 151.

²⁰ *Ibid*, 281.

de Vos and others predicts that for every million species, 100 extinctions will occur per year.²¹ Gore reminds us that it is crucial to act now in order to lead us away from environmental destruction and further depletion of resources and species. At no time has the task of musicians and listeners been more important than today: to put an ear to the ground, hear the earth speak, and translate this sound into forms and shapes that can change our future.

We can start by listening to yesterday and today in order to hear tomorrow with clarity. Several questions readily come to mind: Have certain sounds become endangered or actually disappeared, and if so, can we recover them? How can we attempt to shape our current sonic environments so as to deal with noise pollution issues? Can we still find silence? In “Seeking the Sounds of Silence,” R. Murray Schafer uses humor and irony to decry the use of leaf blowers, street cleaners, and other sonic offenders to create a “sonic sewer,”²² with noise bombardment stemming from such machines making areas visually beautiful but aurally unlistenable.

The following suggestions may help us to listen, remember, and become creatively proactive regarding sonic health and the larger well-being of our planet. As we continue writing letters to editors of local papers about noise pollution, arguing on environmental, aesthetic, spiritual, economic, and social well-being levels, we must also follow through with strong reasons why quieter, less polluting devices would make for more consonant, well-balanced communities.

1. Create or join a local group to recount treasured sound stories from the past such as:

- the sound of bugs and flies dancing with the ceiling lights in a rural Virginia Mt. Clinton Mennonite Church on a Sunday night summer service;
- the sound of heavy, weighted wood-framed windows opening

²¹ Jurriaan M. de Vos, Lucas N. Joppa, John L. Gittleman, Patrick R. Stephens, Stuart L. Pimm, “Estimating the Normal Background Rate of Species Extinction,” *Conservation Biology* 29, no. 2 (2015): 452-62.

²² R. Murray Schafer, “Seeking the Sounds of Silence,” *The Globe and Mail*, September 18, 1989, A7.

in a grade school classroom, sliding upward with a ritual-like chorus of creaks and rattles;

- the sound of 500 people listening to a sermon in a college chapel—shuffling, benches creaking, whispered murmurs, stifled coughs, chirping of birds outside open windows;
- the sound of 500 people opening hymnbooks to page 32 or Bibles to Habakkuk 3:11.

2. Create or join a support group to oppose offending instruments of sonic pain such as:

- leaf blowers, weed trimmers, motorized lawn mowers, or snow blowers used unnecessarily;
- all-terrain vehicles, skidoos, sea-doo's used merely for sport;
- noisy street cleaning trucks when there is little or no debris;
- factories, breweries, and industries whose all-night motors or fans are widely audible;
- air-conditioners chilling one house while churning out noise for an entire block.

3. Lobby tirelessly and locally for:

- resurgence of the broom, the hand trimmer, the shovel. Every time a neighbor creates noise pollution, approach the person with these tools, offering to do the work. Appeal to their love of silence; they have it, they've just forgotten it;
- use of non-motorized tools, bicycles, devices whenever possible;
- return to use of functioning windows that provide cross ventilation.

4. Join international or online groups in order to:

- support the well-being of one endangered bird or animal;

- help establish or support one more nature reserve anywhere in the world;
 - lobby for prosecution of poachers of rhinos, elephants, or lions;
 - lobby for discontinuation of destruction of rainforest, whether for human habitation, coffee growing, or livestock farming;
 - lobby for in-growth of cities (development of inner city densities) while opposing urban sprawl encroaching on farmland, meadows, wooded, or other natural areas.
5. Spend time every day—two minutes, twenty minutes or two hours—in a setting that contains nothing but natural sounds. Make this a necessity, like eating.
- listen to every sound—the wind in trees and grasses, birds, insects, squirrels, all forms of non-human life;
 - allow the time to be meditative, reflective;
 - allow these sounds to be healing, redemptive, and life-changing.

Many recent, inspiring rays of hope are provided by organizations such as the US-based Friends of the Monarch Facebook site, which follows butterflies from chrysalis to migration journey; a Namibian organization to save the cheetah within farming regions; “Song of the Carnivores” performances with Zimbabwean children; and Bird Studies Canada projects conserving Louisiana Water Thrush and other species at risk. If we are very quiet, maybe we can hear the beating of wings, the sound of animal calls, the patterns of bird songs.

In *The Tuning of the World*, the definitive work on sonic environment, Schafer contends that “all research into sound must conclude with silence—not the silence of negative vacuum, but the positive silence of perfection and fulfillment.”²³ While we may not find perfect silence, we begin to build and

²³ R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (New York: Knopf, 1977), 262.

discover safe spaces for silence that are relatively free of the sonic clutter of the 21st century, places where motors and radios are silenced, machines cannot be powered, and where Cage's sonic "affirmation of life"²⁴ can be heard with all its vibrant sounds and holy silences. As we discover these places, we can then listen more clearly to the music of our planet, and seek to create music that celebrates not only the sounds of the earth and the larger universe but the silences from which these sounds emerge.

Carol Ann Weaver, composer, pianist, and Professor Emerita of Music at Conrad Grebel University College, Waterloo, Ontario, has created and directed three Sound in the Land festivals/conferences.

²⁴ Cage, *Silence*, 12.

Begin with the Song of Listening: An Introduction to R. Murray Schafer

Rae Crossman

Dawn. We take the path to the edge of the lake. No one speaks. We begin with the song of listening. Footfalls and morning birdsong. Only a hint of wind in the leaves, slight lapping on the shore. We gather beneath a cluster of pine overlooking the water, expectant. Two crows start a conversation. Fly off. We wait.

As delicate as mist, notes from a clarinet rise and float in the air. Ripple of attention in our bodies. In the distance, an oboe begins to deepen the enchantment. Straggling lines of geese clamor overhead. Now a trumpet enters and affirms the rising sun.

Across the bay, two canoes edge out from behind a point. First the curved bows appear, then the startling emergence of winged figures rising out of the canoes. The costumed dancers, standing in the canoes, astonish us with sweeping movements of their twelve-foot wings. The music summons them to us. They move across the water, resplendent in the strengthening sun. The lake is alive with their mythic presence—the Dawn Birds have arrived!

Soon the Princess of the Stars is evoked by the incantation of the music. She, too, appears on the lake in a canoe and sings her otherworldly aria over the water. We sense the thread of a narrative: distraught love, compassion, and redemption. Amidst an aura of mystery, we are attuned to the dawn and the unfolding revelations. Our lives are quickened. This is why we have come. A pilgrimage, of sorts. To listen, to marvel, and to be changed.

The 2014 Sound in the Land festival/conference included a dawn concert at nearby Columbia Lake, inspired by R. Murray Schafer's natural-environment music, including excerpts from his *Princess of the Stars* hierophany, or sacred drama.

A Canadian, Schafer is a highly honored composer, educator, author, visual artist, and environmentalist. As a pioneer of acoustic ecology, he

coined the term “soundscape” and has examined our acoustic environment in natural, rural, and urban settings in his seminal book *The Tuning of the World*.¹ Devising exercises to sensitize our hearing, he has also advocated for the creation of desirable soundscapes in which to live.

It was his own lifestyle change, moving to live in the country, that created a shift in the context of his musical creativity, taking music out of the concert hall and into the wild places where it was born. Music made along forest paths, in rocky gorges, across lakes, under the stars. Schafer has reaffirmed the ancient relationship between music making and nature—to recover a sense of the sacred. In so doing he connects performers and audience with the natural environment as a way to affect deep attitudinal change and to foster a sense of reverence. To elicit exaltation!

Senses alive. Wonder alive. He invites us to rediscover the miraculous through the transformative power of art. He invites us to listen.

For more than twenty years, in canoes and along forest trails, Rae Crossman has lived the roles of several mythological characters in R. Murray Schafer's natural-environment works. Crossman is program director of 'Waterloo Unlimited' at the University of Waterloo.

¹ R. Murray Schafer, *The Tuning of the World* (Toronto: McClelland and Stewart, 1977).

Sound Around

R. Murray Schafer

In one of his notebooks Leonardo da Vinci questions the origin of sound: “When an anvil is struck by a hammer, does the resulting sound issue from the hammer or the anvil?”¹ The answer is neither, because no object can make a sound by itself. All sounds result from two or more objects moving and touching one another. Every sound is the result of a collision of some sort.

But doesn’t it seem strange that when two objects touch one another, the result is a single sound? We could say that with sound, one plus one equals one. Every sound fades away and dies, or is overwhelmed by another sound or sounds. No sound lives forever.

Listening to the soundscape and viewing the landscape are two very different experiences. You are always at the edge of the landscape looking in, but you are always at the center of the soundscape listening out.

“God is a presence whose center is everywhere and whose circumference is nowhere” is attributed to St. Augustine of Hippo.² In many cultures around the world the Divinity is aural, not visual. The Hebrew-Christian-Islamic God is heard rather than seen.

Moses was afraid to look at God, so he listened. Jacob conversed with God in his dreams. We might have expected psychiatrists to pay more attention to the sounds of their patients’ dreams, but Freud and Jung analyzed only the visual contents. The native people of Canada took the sound components of dreams far more seriously. I knew a Dakota Indian who told me that whenever he heard the wind blowing in circles it was his grandmother calling to him, and he always stopped to listen.

From the day you were born until the day you die, you will hear sounds and you will make sounds.

¹ Leonardo da Vinci, *The Notebooks of Leonardo da Vinci*, Vol. 1 (London: Folio Society, 2011), 227.

² *The Westminster Collection of Christian Quotations*, ed. Martin H. Manser (Louisville, KY: Westminster John Knox Press, 2001), 133.

There are three ways to bring a sound to life. You can blow on an object, or scratch it, or strike it. But there is also a fourth way to experience sound: to imagine it. Composers imagine great sounds and soundscapes which they write down. In this way, certain sounds have been sustained with relative accuracy for several hundred years. In other cultures, sounds have been sustained by continuous repetition. But no sound lives forever.

There are five kinds of sounds that matter:

Sounds that are heard.

Sounds that you hope to hear.

Sounds that are remembered.

Sounds that are imagined.

Sounds that are missed.

In a haiku poem by the Japanese poet Issa there seems to be a paradox:

Cricket!

Although it was next door you sang,

I heard you here.³

Is the sound in the place where it originates or in the place where it is detected? Visual experiences are instantaneous. Aural experiences take time to unfold. The eye seeks. The ear must wait. But we are always hearing something. We have no earlids. We are condemned to listen. The ear has its limitations. Unlike other parts of our anatomy, the ear cannot be made stronger by physical exercise—but it can be made more discriminating.

All sounds are original. Some sounds will be heard once and never again. Correction: Most sounds will never be heard again. Correction: NO sound will ever be heard the same way again.

We see the world as a noun: that is, as an object or series of objects. We hear it as a verb, or as an activity or series of activities. Small villages used to be “orchestrated” by a variety of small industries. For instance, in the village of Sélestat (France), each street was named by activities that took place within it. There was the *rue d’Étain* (Tin or Pewter Street), *rue de la Poterie* (Pottery Street), *rue de la Cuirasse* (Armor Street), *rue de Marteau* (Hammer Street); then there was *rue des Oies* (Goose Street), *rue des Veaux* (Calf Street), and *rue des Canards* (Duck Street), all leading to the *rue de la*

³ As quoted in R. Murray Schafer, *My Life on Earth and Elsewhere* (Erin, ON: Porcupine’s Quill, 2012), 229.

Grand Boucherie! Towns everywhere achieved their aural character by the industries within them.

Noun: object. Verb: activity.

Visual experiences are instantaneous. Aural experiences take time to unfold.

Hearing is God's gift, but listening has to be learned. "Why do we hear better when we hold our breath?" asked Aristotle.⁴ Is it true? Try it. I used to give children this assignment: "Silence is elusive. Try to find it!" And they would go home and search the house from bedroom to cellar, but they would never find it. Often it was quiet but never absolutely silent.

Here is another exercise taken from Aristotle. "Why," he asks, "does cold water poured into a jug make a shriller sound than hot water poured into the same vessel?"⁵ Try it. The sounds are different. Aristotle must have had good ears to pick up this subtle variation in the soundscape.

Each trade used to have its own unique sounds: the cobbler, the tailor, the butcher, the carpenter, the ironsmith, the stonemason, the hunter, and the fisherman. The sounds associated with these professions are now changing and disappearing. What soundscape collector has recorded them? Old sounds are dying every day. Where are the museums for disappearing sounds? New sounds are emerging everyday. Who is authorizing them? Who is studying them?

In the past, information about what was happening in other places came from an audible distance. A wagon approaches from over the hills or on a long, dusty road. At first it is merely a speck of sound—like the distant buzzing of an insect. As it draws closer it releases a whole constellation of concatenated sounds: squeaking wheels, plodding hooves, and finally the voice of the wagoner bringing news of what was happening elsewhere. From another direction a post horn is heard a mile or more away. The postilion signals information ahead—such as how many passengers will be staying overnight or will stay for dinner.

In those days people learned about what was happening in the world by keeping their ears open. Long distance listening was the privilege of living in the country, and to an extent it remains so today.

⁴ *The Works of Aristotle*, Vol. 7, *Problemata*, ed. E.S. Forster (Oxford: Clarendon Press, 1927).

⁵ *Ibid.*

There is no long-distance listening in the city. All sounds are close and immediate. Many (perhaps too many) are too loud. There is no long-distance viewing either. High-rise buildings block our view.

The media are capable of multiplying sound by thousands or millions of times and by transmitting it over great distances—a technique I have called *schizophonia*—split sound. The media consists of speakers—human voices. They are not in the least interested in the sounds of nature outside the city limits. They are not interested in whether the sounds of nature can still be heard. When was the last time you heard birds or animals on the radio?

I once had the idea to plant microphones at various sites in the wilderness and to transmit the sounds of nature to the city. No one was interested. But this subject needs further exploration. For instance, a backyard soundscape of a running stream or of crickets in the night can persuade people that it is not as hot as they think, and could probably result in a substantial reduction of ventilation costs.

Most of the sounds in an urban environment are monologues. One does not carry on a conversation with one's radio or air conditioner, or even with a fellow passenger in the subway or on the bus. What is happening today is expressed clearly in three related German words: *hören* (to hear), *gehören* (to belong to), and *gehörchen* (to obey). We hear sound; we belong to sound; we obey sound.

When we are well outside the city and the environment is quiet, we begin to hear sounds from far and near: birds, breezes and the branches of trees . . . and perhaps some faint sounds from times long past:

When you pass by Buffalo Lake in the evening you can hear dogs barking and children playing. They are the ones who fell through the ice and drowned many years ago.⁶

In the early *shouwa* period in Japan people used to gather at *sinobazono-ike* pond to listen to the blooming of the lotus flowers. . . . Did they really hear them? Or did they merely imagine they heard them? Is there a difference?

“Learn this custom from the flower. Silence your tongue,” says

⁶ Ella Elizabeth Clark, *Indian Legends of Canada* (Toronto: McClelland & Stewart, 1960), 93.

Jalaluddin Rumi.⁷ In the Finnish language one says, “What do you hear?” Not “How do you do?” In the 14th-century *Canterbury Tales* the English poet Chaucer also says: “How now, what do you hear?”⁸

Within Finnish culture silence is regarded as part of the conversation. Professor Michael Berry of the University of Turku has studied silence within Finnish speech, noting that “silence and respect are typical Finnish characteristics. The Finns give others space, don’t really like active small-talk, and interpret active silences to be an important part of a normal way to communicate.”⁹ Further to this point, Professor Olli Alho, in “A Guide to Finnish Customs and Manners,” suggests that “Finns are better at listening than at talking, and interrupting another speaker is considered impolite. A Finn does not grow nervous if there are breaks in the conversation; silence is regarded as a part of communication.”¹⁰

Have you ever listened to the fluttering of the leaves on different trees? Each tree has its own voice and language. Thomas Hardy gives a whole catalog of different leaf sounds at the beginning of his novel, *Under the Greenwood Tree*.¹¹

Have you ever put your ear to the trunk of a tree and listened to the flowing of the sap? Yes, it can be heard. Have you ever stood at the side of a stream and counted how many different places the sound of the moving water can be heard from? And have you ever rearranged the stones to produce a different sound in the water? Japanese gardeners are trained to do this. “The verie essence and, as it were, spring-heade and origin of all music is the verie pleasant sounde which the trees make when they growe,” says Edgar Allan Poe.¹²

⁷ Jalaluddin Rumi, *The Rumi Collection: An Anthology of Translations of Mevlana Jalaluddin Rumi*, ed. Kabir Helminski, trans. Peter Lamborn Wilson (Boston: Shambhala Press, 2005).

⁸ Geoffrey Chaucer, “The Miller’s Tale” from *The Canterbury Tales*, www.librarius.com/canttrn/milltale/milltale231-288.htm, accessed January 13, 2015.

⁹ Information on Finnish silence has been provided by Helmi Järviluoma-Mäkelä, Cultural Studies Professor at the University of Eastern Finland, and by Erja Hyytiäinen, Communications Officer at Turku University, with quoted material found at www.utu.fi/en/news/articles/Pages/whats-up-with-the-finnish-silence.aspx, accessed January 19, 2015.

¹⁰ Found at <http://finland.fi/Public/default.aspx?contentid=160036>, accessed January 19, 2015.

¹¹ Thomas Hardy, *Under the Greenwood Tree* (1872; repr. London: Penguin, 1998).

¹² Edgar Allan Poe, “Al Aaraaf.” Comment as found in Poe’s footnote 22 to the poem written

God is a first-rate acoustical engineer. For example, we can move our arms, our legs, and our body almost silently. Unlike machines with noisy moving parts, most of God's work is accomplished quietly or even silently. Even if I raise my voice to a shout, I can still produce only 85-90 decibels of sound—not enough to harm you. But give me an amplifier and I can kill you.

If the population of the world continues to grow—at the present rate it is expected to increase by one billion within the next twenty years or so—we will certainly have lots of work sustaining or reducing the noise accompanying such an expansion. It would seem that all of us concerned with sound reduction or improvement may be able to expect full-time employment for some years to come.

In my hand I hold a small potential sound. If I drop it, it will attract immediate attention. Dropped sounds almost always attract immediate attention. Perhaps you will remember this moment, even if you forget all the words of my lecture. Listen! (Schafer drops small object.)¹³

R. Murray Schafer, foremost Canadian composer, internationally acclaimed writer, and originator of "soundscape," is the father of acoustic ecology.

in 1829 and published in 1879, www.thefullwiki.org/Al_Aaraaf, accessed January 13, 2015.

¹³An earlier version of this article appeared in an online journal produced by the Brazilian Universidade de Santa Cruz do Sul, <http://online.unisc.br/seer/index.php/reflex/article/viewFile/4635/3282>, accessed November 22, 2014. Permission to use this material was granted by the editor, Dr. Moacir Fernando Viegas.



Canoe birds. Dawn concert performance of part of "Princess of the Stars," Columbia Lake, Sunday, June 8, 2014. Photo credit: Alan Morgan



R. Murray Schafer improvising at Leanne Zacharias's workshop, Saturday, June 7, 2014. Photo credit: Matthew Griffin

Ordering of Sounds: The Homogenization of Listening in the Age of Globalized Soundscapes

Sabine Breitsameter

Introduction

In 1977, Canadian pianist Glenn Gould produced *The Quiet in the Land* for CBC radio—a one-hour documentary on Mennonite life in and around Kitchener-Waterloo, Ontario and Winnipeg, Manitoba based on interviews and vocal soundscapes. In it he applied his polyphonous audio aesthetic of “contrapuntal radio,” mixing materials in a way considered an absolute no-go for a professional broadcaster: spoken word mixed with spoken word. For listeners this created a new experience; in contrast to their long-time radio listening habits, they would soon get lost in a mélange of unidentifiable words dissolving into mere sound. Gould subordinated his interview materials to the compositional principles of a fugue, which work on sonic, not semantic, patterns. The characteristic voices of his interviewees can be followed by their pitch, their intonation, or their sentence melody, but only vaguely by their content. Even today, *The Quiet in the Land* is considered a challenging production, forming an enlightening frame around the topic of worldwide homogenization in urban soundscapes and ways of listening. It is this homogenization that I will explore in this paper.

Senses and Society

“The *forming* of the five senses is a labour by the entire history of the world down to the present,” Karl Marx wrote in 1844. “The [human] senses caught up in crude practical need have only a *restricted* sense.”¹ Here Marx implies that a community’s economic and social forms of organization define people’s senses and therefore also form their interests, objects, and methods of perception. These interests and perceptions adapt themselves according to the core values of the dominant societal system and are shaped within a

¹ Karl Marx, *Economic and Philosophical Manuscripts of 1844*, tr. Martin Milligan (Mineola, NY: Dover, 2007), 108-109.

capitalist society mainly by the values of possession and ownership. “In place of *all* these physical and mental senses there has therefore come ... the sense of *having*,”² Marx adds.

Throughout their writings, Karl Marx and Friedrich Engels extensively describe the sensory deprivations that members of the working class had to endure in order to function in the production process. These included heat, dust, blinding brightness, painful body postures and repetitive gestures, filth, stench, bad food, and, last but not least, noise. All these privations overwhelmed, numbed, coarsened, and mutilated their senses and organs of perception, which meant that the masses of workers rarely, if ever, had the chance to access without hindrance the range of possibilities that their senses and minds were capable of experiencing. Following Marx, we may say that various societal conditions also form auditory realities and create specific sonic environments. Soundscapes from today’s consumer capitalism do not bear the same massive noises as the gigantic machinery of the 19th and early 20th century. However, these capitalistic consumer-society soundscapes obviously cannot keep up with the aesthetic sophistication of their visual environments. Induced by commodification, product and graphic design, architecture and fashion have created highly aestheticized everyday visual surroundings, but the soundscapes remain shapeless, insignificant and, often enough, ugly beyond any concern of design.

Conformation and Equalization of Urban Soundscapes

At various symposia during the last two years, I have presented soundscape recordings of rush hours from megacities as diverse as Riga (Latvia), Frankfurt, Chicago, Singapore, and Sao Paolo. All the soundscapes were recorded in the same way—from the perspective of a pedestrian standing alongside a busy street, in the exact same way as the majority of urban dwellers constantly experience their living environments. It is important to note here that my topic is the habitual experience of everyday routines, not the sophisticated hearing practices of an aesthetically and artistically oriented person.

On listening to the sounds of the recordings, not a single audience member could identify any one of the recorded cities, not even its region or

² Ibid., 106.

its cultural sphere. There were simply no significant, recognizable sounds. Each recording conveyed similar engine sounds made by the universally popular car brands covering up most of the environmental sounds unique to the area. Wind and bird sounds, sounds of inhabitants' footwear, and sounds of other human activities and conversations were subdued, leaving characteristic language traits undetected.

As well, I collected a number of soundscape recordings from shopping malls in London (England), Buenos Aires, Warsaw, and Bangkok. It was always the same kinds of pop songs that would blare from fashion shops and supermarket chains. The beeping of scanning cash registers, the tinny rattling of shopping carts, the whirring of air conditioner fans, the thrumming of escalators, the ringtones of cell phones, and the voices of countless humans would all get mixed up unidentifiably within the reverberant acoustics of malls all over the globe, all looking and sounding alike. Given these auditory impressions, the question "Where, exactly, am I?" turns out to be unanswerable.

Who of us can remember how Vietnam's capital, Hanoi, sounded in the mid-1990s when the soundscape was dominated by the gentle buzzing of thousands upon thousands of bicycles? Who remembers the mid-1980s soundscape of the South Indian industrial center Bangalore, with its broad, tree-fringed cinema boulevards, where an uncountable number of people expressed their movie-going enthusiasm with great vocal liveliness? These are but two examples, and I do not conjure them up in order to lose myself in nostalgia. However, the former soundscapes of these cities present striking illustrations of an acoustic identity of which barely anything is left today.

Acoustic Identity and Quality of Life

Many people experience an everyday life soundscape as so specific and unmistakable that, on hearing it, they feel an intensification of the "here and now." With good reason they speak, for example, about their favorite place at the seaside, where the specific sounds of waves, wind, and water create an exceptional atmosphere. By contrast, a lack of acoustic identity means that we become less rooted when we cannot sense familiar atmospheres or be fascinated by sounds unique to individual locations. When urban soundscapes are exchangeable because car brands, popular music, and

Arbeitsrhythmen (work rhythms)³ are similar or identical, the specificity of a place will inscribe itself less intensely into the mind and memory of local inhabitants. Our being able to identify unique and specific acoustic settings relates closely, therefore, to freedom from alienation.

Global Conformity of Soundscapes: Aesthetic Consequences

Where production, management, and consumption take place according to similar principles, methods, and infrastructures, as well as with the same economic goals, there will be identical machinery noises, communication means, and traffic flow, resulting in analogous sound environments. Such an assimilation of soundscapes can be understood as the immaterial manifestation of a rampant, economic assimilation to which the term “globalization” is commonly applied. Aesthetic “equalization”⁴ and its consequences, caused by a huge, all-encompassing, technologically and economically driven worldwide movement, became a prominent topic among some thinkers in the last century. For instance, psychiatrist-philosopher Karl Jaspers in the early 1930s was criticizing what he called “planetarization,” which homogenizes all aspects of life, especially as it minimizes the diversity of mindsets and perception, and changes human beings into mere functionaries within the economically and technically driven process of production and consumption.

Much later, in 2003, Canadian scholar David Howes explained the aesthetic consequences of globalization by describing changes in the sonic environment that lead to sensual simplification and audio-aesthetic impoverishment.⁵ In his discussion, Howes cites anthropologist Steven Feld’s research in Papua New Guinea during the 1980s on the relationship between the natural rainforest soundscape and the singing and soundmaking of the Kaluli people. Today, their former acoustically-rich environment has been deforested and exploited commercially. Howes suggests that these changes have forced the Kaluli people to migrate to urban centers to enter the labor

³ The German term *Arbeitsrhythmen* refers to rhythms of one’s work schedule—the starting and stopping of a workday or work week, and the rhythm of intensity versus relaxation.

⁴ Cf. Karl Jaspers, *Die geistige Situation der Zeit* [The Spiritual Condition of the Age] (Berlin: W. de Gruyter, 1931), 74. Jaspers used the German term *Nivellierung*, “leveling out.”

⁵ David Howes, *Sensual Relations: Engaging the Senses in Culture and Social Theory* (Ann Arbor, MI: Univ. of Michigan Press, 2003), 217.

force. Having been exposed to the sensual impressions of city life, many of these workers sought to engage in their new soundscape by abandoning their complex traditional vocalizations in favor of tepid, if popular, imitations of Australian string band music.⁶ Their becoming part of the commercially driven globalization process crucially affected this dramatic shift of their auditory culture.

Some of the Kaluli underwent an adaptation process in order to function in the expanding world of industrial machinery, consumerism, and capitalist economy. This change of aesthetics is closely intertwined with changes in ethics, and bears significant societal consequences. In this case, once something had left an individual's sensorium, it ceased to exist and became difficult, perhaps almost impossible, to retrieve. An overall atrophy of sonic diversity results in the simplification not only of urban soundscapes but of auditory perception and production.

Apart from Marx's political-economic ideals, it is the structure of Marx's argument that is interesting here. His ideas were shaped by Montesquieu's milieu theory and Kant's rejection of a "pure intuition," later elaborated further by such thinkers as Freud, Walter Benjamin, Jaspers, Martin Heidegger, Marshall McLuhan, Felix Guattari and Gene Youngblood, and providing a straight line to practitioners such as physiotherapist Moshe Feldenkrais and sonic researcher, composer, and educator R. Murray Schafer.

In *The Tuning of the World*, Schafer elaborates on the aesthetic consequences of the disappearance of acoustic identity.⁷ To do this, he reconstructs and describes changes in soundscapes—from the rural ancient Greek environment to the Industrial Revolution and finally to the Electric Revolution—relating these changes to the changes of hearing methods and practices, and to the role of listening in the respective societies. Schafer explores the idea that society's lack of ability and willingness to listen originates from many undifferentiated, unintentional, and unattractive soundscapes to which people are increasingly subjected and which have made listening generally irrelevant in daily perceptual practice.⁸ According to Schafer, soundscapes not only represent natural, cultural, and technological objects

⁶ Ibid.

⁷ R. Murray Schafer, *The Tuning of the World* (Toronto: McClelland and Stewart, 1977).

⁸ Ibid., 4.

and phenomena but also allow us to draw conclusions about a society's priorities, deficiencies, and power structures. The implied consequence is a hierarchization of societal values, causing auditory impositions on individuals. These values shape both the sounds reaching our ears and the manner in which we perceive them. These globally conforming economic and industrial structures generate and disseminate specific value systems causing relatively equalized soundscapes worldwide.

Ordering of Sounds and Role of Audio Media

These conformed soundscapes not only define the objects of listening but also the methods whereby we listen to the world around us. Schafer's approach implies that the existing structures and shapes of the sonic environment to which members of a society are constantly exposed inscribe themselves as individual and social listening attitudes and patterns. They carve out and establish ways of listening, and they create listening habits. Within this context, Schafer assigns an important role to the spatial auditory awareness that he associates with the terms "lo-fi" and "hi-fi" soundscapes.⁹ A hi-fi environment is a soundscape in which all sounds reach the ear clearly, both directionally and spatially specified, with distant and soft sounds reaching it. A lo-fi soundscape is characterized by a broadband wall of noise that allows a person only to perceive sounds within a limited radius. Because the audible horizon is narrowed, broadband noise masks all distant and soft sounds.

Lo-fi environments typically exist within urban soundscapes that contain constant car sounds, rattling air conditioners, or vibrating construction equipment. Also, a typical urban design pattern allows for block housing to be constructed along streets, making it almost impossible to listen to any sounds beyond street and city noises. This results in widespread listening habits that focus on strong foreground sounds while neglecting distant or low sounds. The corresponding urban sound typology and the resulting listening habits suggest that human listening patterns are socially configured so as to block out certain sounds.

These listening patterns are perpetuated by a globally pervasive audio media production aesthetic, found mainly in news or entertainment-oriented radio or TV programs, film soundtracks, and computer games.

⁹ Ibid., 8.

This aesthetic reproduces urban listening experiences in as much as the succession of sounds is strongly condensed, and pauses or silence are rarely audible; the sounds are recorded only a short distance from the microphone, therefore appearing close to the ear; distant or low sounds are an exception; and space as a variable parameter of audio design plays an insignificant role. The experience we hear is reproduced by the experience we design, and vice versa.

The described production aesthetic also corresponds to the compression principles of the MP3 data format, which is based on the assumption that sound data can be reduced by eliminating auditory values deemed inaudible by the audio industry. These less prominent sounds are considered to be masked by other simultaneous sounds. Reduction and masking relate to a globalized urban soundscape typology, with the MP3 format allowing for an increased availability of sound that is easier to store, multiply, and disseminate. Thus, this format has led to a further simplification and commodification of sound. At the same time, the lo-fi soundscape orders sounds in such a way as to impose reductions on the audible world, helping listeners filter out distant or quieter sounds, and to exercise a clear distinction between “signal” and “noise.”

Glenn Gould’s *The Quiet in the Land* does just the contrary, by mixing spoken word with spoken word, and inviting listeners to appreciate all sounds, without ignoring the “noise.” This approach differs from one in which a succession of signals containing supposed significance are shaped, reduced, and condensed in order to direct the audience’s ear toward the recognizability of certain sounds. Gould’s aim was to reflect on the beliefs and practices of Mennonites who, at least in part, attempt to renounce a world dominated by machines, commercialization, and utilitarianism. Gould’s production aesthetic can be understood as a resistance against the homogenization of listening and the assimilation of ubiquitous mainstream priorities and values. Instead, *The Quiet in the Land* celebrates the autonomy of the human auditory sense beyond being directed and “made to listen.”

It is noteworthy that the only program slots in media where Gould’s type of production aesthetics can be produced and broadcast are found in certain cultural programs on public radio, especially in Europe, within certain documentaries and various forms of experimental music, all of

which contravene more conventional production aesthetics and ordering of sounds. Most networks which air these kinds of programs do not sell their airtime and have not yet surrendered completely to a commercialized hierarchy of values. Those broadcasting corporations which program non-commercial formats of music, documentaries, or radio art are in actuality resisting commodification, and therefore do not attend to “the sense of having,” which Marx formulated as the significant motivator of sensory appropriation.

Conclusion

Some people believe that global conformity, in terms of acoustic identity, does not exist. For them, even the most stylish shopping mall or the most dense urban traffic scenario still contains specific, aesthetically interesting sounds that are uniquely identifiable. Indeed, there are artists who gain subtle auditory values from urban listening experiences, such as Pierre Henry in his radiogenic composition “La Ville”; Peter Cusack in his soundscape productions with materials from London, Berlin, and Beijing; or the late Steven Miller, who ran the audioblog “Sight Sounds Words.”¹⁰ Miller documented, nearly daily, the soundscapes of large cities in which he lived with complex and poetic field recordings. These recordings do not reproduce the ordinary urban audio patterns that I described above. On the contrary, a different kind of listening emerges from them, which can be called *gestaltendes Hören* or “giving shape while listening” and which acts as a kind of countermovement.

To listen, even where one would expect not to hear anything worthwhile, breaks through the restrictions of collectively practiced routines and orthodoxies and explores ways of finding alternative listening perspectives. This can be done by making microphone adjustments, exploring new phases and rare moments of sonic activity, and listening for auditory shapes and forms that travel beyond the seemingly stable and expected ordering of the sounds. This kind of listening allows one to understand that there are concepts that can subvert the usual, homogenized auditory patterns and allow for expanded acoustic realities.

By fostering the development of creative and innovative sonic art

¹⁰ <https://sightssoundwords.wordpress.com/about/>, accessed January 15, 2015.

forms, we are led to ask how these new ways of listening can become more important to the larger society in which we live. If they lead us to deeper understandings and cognition about the world around us, is it not important that we recognize them? How can we be sure that listening will remain an act of freedom, enabling each listener to gain new perceptions rather than merely submitting to social conformity?

One important goal is to expand everyone's appreciation of the auditory in *all* situations of life and not to relegate it to music alone. This means not separating listening from everyday perception and not making listening relate only to cultural or artistic activities. This can be successfully achieved only if the sonic environment is deemed worthy of being listened to by strengthening its own acoustic identity. However, these measures can be developed only if listeners explore the possibilities of differentiated sonic perception. Aesthetic listening education is the key: such education has the freedom to question listening habits and economic utilitarianism, while integrating various categories of a learned musical art with the auditory perception of everyday life.¹¹

Equally important is initiating and encouraging discourses that evaluate societal priorities regarding quality of life, communication patterns, autonomy, and health. As we become able to base a new ordering of sounds on our new understandings, and learn how to understand the roots of sonic problems, we can see more clearly that sound has political dimensions and is not merely an aesthetic experience.

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¹¹ To the best of my knowledge, this does not conform to the curricula of music education today. German schools, for instance, largely uphold traditional concepts of the musical ordering of sounds.

Acoustic Ecology and Ethical Listening

Eric Leonardson

While I was walking alone in the Amherst College Wildlife Sanctuary in Amherst, Massachusetts, I had a startling encounter. Without warning and from about twenty feet behind me, a dog barked. It was a single, short, sharp bark—the kind that my dogs make under their breath—a grunt as if to say, “Alert! Who’s that? Listen.” We humans make a similar sound when surprised. But this sound seemed to come from nowhere. I turned around, heart pounding and . . . no dog. No coyote either, nor a wolf or any other creature. Weird. What did I hear? The sound was certainly real enough to startle me. I looked toward the spot from where I thought the sound originated, judging from its timbre, loudness, and directional characteristics. No one there. I was still alone with the trees and plants. Perplexed and a little spooked, I scanned my surroundings for the phantom. With my ears and eyes trained and focused, and my heart still pounding, I tried to make sense of the scene, lest fear get the better of my imagination. I was standing in a small clearing amongst tall pine trees. The day was cloudy and gray. The tree canopy was swaying with the wind. That was the only sound: the stately ebb and flow of waves of wind passing through the conifers.

Differentiating between the ground and the moving things above it (leaves and branches swaying in the wind), I observed no shadows of birds or small mammals either. Just me, the wind, and the trees. Then, a minute later, I heard it again. As I turned to face the source of the sound, I could tell it was not at ground level, where I would expect a ghost dog to be, but emanating from above. I looked up. I noticed that the tall straight trunks of pines were not all growing perpendicular to the ground. Some of the trees were partly uprooted and leaning against each other. Soon enough, when the wind velocity and direction were just right, I heard it again. Then I understood. The mysterious sound was a frictional noise at the point of contact between two of the trees, producing a resonant sound with a pitch and timbre that matched that of an animal voice, human or otherwise. I was

reminded of similar sounds I make myself with a cello bow, rubber balls, and pieces of wood, all amplified with a piezo disc contact microphone inside my self-built instrument, the Springboard.¹ With this ghostly “bark” demystified, I remember being struck by how marvelous it was that the tree’s bark could actually “bark.” I usually avoid anthropomorphizing non-human phenomena, but this experience affirms for me that the woods really do produce uncanny sounds that lie within the vocal range of animals and humans, creating a “voice of the forest.”

I share this simple story to highlight three points. One, the importance of listening and how an awareness of sound can transform one’s relationship to place. Two, my sonic misidentification and correction serves as an example—one among many—of how aural experiences can be difficult to translate into words. These experiences often remain unarticulated and therefore underappreciated. Three, human relationships with animals and nature depend on listening. In fact, hearing is one of our most valuable senses, which is much more pronounced in many species than in humans.

Canadian electro-acoustic composer Barry Truax has suggested that if we are to find ways to listen effectively, we need to develop an ethic of listening that is particularly relevant to the understanding of the lives of other species. In developing such an ethic, it is important to draw a distinction between *hearing* and *listening*. The former is sensory, while the latter involves active, conscious, and, at times, interpretive hearing. We should also bear in mind that levels of attention paid in listening are variable.²

Canadian composer, author, and music educator R. Murray Schafer pioneered a listener-centered approach to the acoustic environment in the late 1960s, objectively studying all aspects of the sonic environment, or soundscape. His fellow researcher and pioneering composer Hildegard Westerkamp concurred that the focus of this approach “was not on ‘fighting noise’ but on gaining knowledge and understanding of the soundscape as a

¹ The Springboard is an experimental instrument I built in 1994 to explore the sonic potential of coil springs and other readily available materials. The weak vibrations of these materials are effectively amplified by a single piezo disc contact microphone. When played with cello bows and homemade friction mallets, it is possible to produce extraordinary sounds that belie the humble origin of these materials. For more information visit: ericleonardson.org/instruments/.

² Barry Truax, *Acoustic Communication*, 2nd ed. (Westport, CT: Ablex Publishing, 2001).

whole, its meanings, its behaviour, and all living beings' behaviour within it.”³

In order to create a focus on listening to and also for the sonic environment, Schafer founded the World Soundscape Project (WSP)⁴ in the late 1960s and early '70s at Simon Fraser University in British Columbia. Its purpose was to study the role of sounds in their context, how various human-caused “noises” are ignored even as they influence everyday life in a changing environment. With a team of six researchers, Schafer coined many new terms for the diversity of acoustic phenomena. Included among them was the important and now popular, though often misunderstood, term “soundscape,” which encompasses all sounds happening around us wherever we are. A deeper understanding of its meaning reveals a systemic set of interrelationships in which sound mediates between listener and environment. Other terms and concepts comprising Schafer's vocabulary include “soundmark,” “signal,” “keynote,” “clairaudience,” “acoustic horizon,” and “hi-fi” versus “lo-fi,” among others.⁵ To redress the Western visual bias of the English language, the invention of these new and workable names helps to identify various unseen and ephemeral sounds so that they can become tangible, comprehensible, and memorable.

The work of WSP fostered a new approach to sonic understanding whereby sound is no longer conceived as only a musician's or acoustical engineer's concern. Rather, sound becomes *everyone's* concern.⁶ Schafer's

³ Hildegard Westerkamp, “Editorial,” *Soundscape: The Journal for Acoustic Ecology* 1, no. 1 (Spring 2000): 4.

⁴ www.sfu.ca/sonic-studio/handbook/World_Soundscape_Project.html, accessed January 16, 2015.

⁵ The first primary resource for definitions of these and other related terms, including “soundscape,” is R. Murray Schafer, *The Tuning of the World*. See note 7.

⁶ When Schafer and the WSP team embarked on their study, it seemed that only composers and musicians were trained to understand the inner content of sounds and how they function on subjective and aesthetic levels. In the past forty years, that awareness has shifted. Today, engineers and people in disciplines that had previously focused solely on objective aspects of sound in the environment are increasingly recognizing that, while sound is inextricably connected with the physical world, aesthetic qualities of sound play significant roles in determining the health of human and non-human life. Because of its role in communication beyond music, the social impact of sound and environment is also more readily acknowledged now.

The Tuning of the World,⁷ initially published in 1977, became the first major resource in this emerging field of sonic studies. The work, variously published and ultimately renamed *The Soundscape: Our Sonic Environment and the Tuning of the World* in 1993⁸, defines these prominent new terms and provides a new vocabulary for this area of study. *The Tuning of the World* served as the summation of WSP's research, garnering international attention and becoming the seminal text in this new field. Of particular importance was Schafer's proposal that the complexity of a soundscape is not merely a consequence of various phenomena in action, which we can passively enjoy or endure. Rather, he argued that we are co-creators of the soundscapes we inhabit; often unaware, but nevertheless actively altering the soundscape, whether in a remote wilderness or a densely populated urban center.

The Tuning of the World prominently introduces "acoustic ecology"⁹ as the study of relationships mediated through sound between listener and environment. This begins with listening, and concerns sound making in context, i.e., not in a laboratory but in situ. Schafer proposes "acoustic design," a newly minted "interdiscipline" that unites social, artistic, and scientific concerns in its study of the environment.

The second major resource in sonic studies, appearing in 1978, was *Handbook for Acoustic Ecology*.¹⁰ Edited by Barry Truax, a member of the WSP's research team, the *Handbook* acts as a compendium of terms describing sound in the fields of acoustics, communications, linguistics and music, among others. While Schafer's *Tuning of the World* and subsequent books are inspirational and required reading for anyone interested in social, aesthetic, and scientific aspects of sound, the *Handbook* adds the terms coined by WSP and Schafer to the established lexicons. It remains a useful technical reference for students, teachers, researchers, and anyone else

⁷ R. Murray Schafer, *The Tuning of the World* (Toronto: McClelland and Stewart, 1977).

⁸ R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT: Destiny Books, 1993).

⁹ Schafer, *Tuning of the World*, 205.

¹⁰ *Handbook for Acoustic Ecology* (*The Music of the Environment Series*, No. 5), Barry Truax, ed. (Vancouver: A.R.C. Publications and The World Soundscape Project, 1978). A CD-ROM version of the *Handbook* is included with sound examples in *Acoustic Communication*, 2nd ed., 1999.

seeking to delve deeper into sound and soundscape studies.¹¹

Forty years after the introduction of acoustic ecology and acoustic design,¹² the global movement spawned by Schafer and the World Soundscape Project has branched off into various new, though related, directions. Acoustemology (acoustic epistemology), ecomusicology, ecoacoustics, and landscape ecology are but a few. The first international conference on acoustic ecology, also called “Tuning of the World,” took place in August 1993 at the Banff Centre in Alberta. At this auspicious event, the World Forum for Acoustic Ecology (WFAE) was founded in response to the global interest created by Schafer’s work. At Banff 1993, esteemed ethnologist Steven Feld and American experimental composer Pauline Oliveros were active participants, drawing their respective fields into the wider work of WFAE and acoustic ecology. Oliveros, one of the few female pioneers of electronic music, is also founder of the Deep Listening Institute for the therapeutic and developmental practice of listening awareness,¹³ serving as a logical extension of the WFAE’s work.

In the early 1990s, the Internet played a very minimal role in WFAE communications. However, several years later, with increasing Internet presence, the acoustic environment rapidly transformed into the global, electroacoustic “mediascape” that is now a reality. In 2008—15 years after WFAE began—I was among a small group called the World Listening Project. Because of the Internet we now had the means by which we could realize our ambitious aim of collecting and presenting field recordings from around the world. Later, we started the annual World Listening Day, held every July 10 since 2010, engaging people globally in their listening of our world. Our outreach efforts gained support from Schafer, Oliveros, and an

¹¹ Truax builds upon this foundation in *Acoustic Communication*. With a basis in the social sciences, he elaborates on acoustic ecology with additional attention to the impact of digital technologies of communications and audio media. Composers frequently cite his attention to the practice of “soundscape composition,” while for a broader public his book provides a bridge from Schafer’s “listener-centered” focus to a community-centered one that addresses the inner and outer complexity of soundscapes and their conscious design, considering both social and aesthetic needs.

¹² Schafer, *Tuning of the World*, 205.

¹³ For background on Oliveros and Deep Listening, see www.paulineoliveros.us/about.html, as accessed January 16, 2015.

international host of artists, researchers, and activists.

Among the World Listening Project's biggest supporters is Bernie Krause, a student of Oliveros in the 1960s. Krause is an internationally recognized author, musician, former member of Pete Seeger's folk band The Weavers, bio-acoustician, naturalist, and advocate for saving endangered natural soundscapes. His records and film scores are noteworthy and popularly recognized. Nearly 50 years ago, Krause traveled the world, recording nature sounds or "biophonies," amassing a vast archive of 4,500 hours of recordings documenting some 15,000 identified life forms.¹⁴ In addition, his holistic theory of biological environments attests to his work as an artist and scientist who draws inspiration from Schafer's listening ethic. Krause's latest book, *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*,¹⁵ has received positive critical and popular recognition.

In 2009, I asked Krause to write a vision statement for the World Listening Project. He immediately responded with this statement:

A few remaining societies in our vast world know how to listen. It is an inherent part of their existence. One in which the received soundscapes of the forests, high plains, deserts, mountains, and coastal regions combine seamlessly with the visual, olfactory, and tactile senses. In some tropical regions dependence on acoustic perception supersedes that of all the others. Natural soundscapes serve as inspiration for their song and dance. It heals them physically and spiritually. Western society bases most of what it hears, or what it knows, on the visual. We actually hear what we see. The World Listening Project aims to transform that perception in our otherwise urban-centric and abstracted lives. At a time when we are facing not only a silent spring but a silent summer, fall, and winter as well, it is clear that where a picture is worth a thousand words, a soundscape may soon be worth a thousand pictures.¹⁶

¹⁴ www.wildsanctuary.com, accessed January 15, 2015.

¹⁵ Bernie L. Krause, *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places* (New York: Little, Brown and Company, 2012).

¹⁶ Personal e-mail, June 3, 2009.

Krause's notion that "a soundscape may soon be worth a thousand pictures" is worthy of deep consideration, and is consonant with Schafer's tenet that humans tend to privilege visual experience over aural sensation and knowledge. But can these words lead to sound? Try to just listen, if you can. Now. Sounds are all around, and the sounds go 'round and 'round. What do you hear? The near, the distant, the barely audible . . . the "bark" of two trees? There are new worlds awaiting active listeners.¹⁷

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¹⁷ An earlier version of this article appeared on the Center for Humans and Nature website, www.humansandnature.org/blog/acoustic-ecology-ethical-listening, accessed November 10, 2014. Permission to use this material was granted by the editor, Gavin Van Horn.

SECTION II

Mennonite Soundscapes from Appalachia to Africa, Mexico to Canada

Redbud Season

Ann Hostetler

Let labor cease while the redbuds bloom.
Shhhhh. Behind the screen of fuschia lace

winter trees are changing clothes.
Come out! Leave everything behind—

redbuds bloom but once a year.
Have you forgotten how to pray?

Eavesdrop on the bees that hover
in apple blossoms, dandelion flowers

gathered on the green dance floor
where cardinals hunt in purple shade.

*Ann Hostetler is a poet and Professor of English at
Goshen College, Goshen, Indiana.*

Appalachia to Africa and Back: A Mennonite Soundscape Remembered

Kathleen Weaver Kurtz

In the beginning there was silence. Profound. Complete. And then sound began, as my tiny ears slowly became sensitive enough to detect the noises of my watery world—the steady, constant beat of my mother’s heart, the whoosh of blood in her veins, and the bubbles and gurgles of food traveling through her digestive tract. I began to hear my parents’ voices, the clicking of typewriter keys, the clanking of kitchen pots, 78 rpm records playing *Messiah* choruses over and over again. Beneath and around those sounds was silence, a silence that contained me, and, like a ground bass, created a structure on which all the sonority of my life would be built. This silence, as eloquent as words, as rich as four-part harmony, as empty as velvet blackness, called to me from earliest childhood to listen at a deeper level. It drew me toward the sound of sheer silence—the silence that Elijah heard. It invited me into a Presence beyond words.

This I could not articulate at two-and-a-half years old, but its calling attends my first memory. We lived in a remote, narrow Kentucky valley. One evening I sat on a wooden stool on our screened-in back porch with Mama beside me. No one spoke, but we listened intently for the distant, dull clank of the cow bell which would signal Papa’s return with its vagrant wearer. I don’t remember hearing the bell, only the pregnant silence, the waiting, the expectation, the complete trust and peace in that silence.

Kentucky nights contained more than silent epiphanies. The darkness carried sounds of impending violence—hollow baying of hunting hounds as they closed in on a hapless possum somewhere off in the hills. That deep canine chorus of disembodied danger filled me with breathless emptiness. But I was inside, warmed by the kerosene stove, surrounded by the peaceful safety of my parents’ voices, like roosting hens clucking softly. Then we moved from Kentucky to the Shenandoah Valley—Park View, Virginia, to be exact, the small community clustered around Eastern Mennonite College

(EMC), now a university, a community steeped in Mennonite values and saturated with Mennonites. It was a less exotic, more homogeneous world that folded me in. I was one of them.

It was here that I first learned the silence of absence, a silence different from beneficence. This was the silence of my father's airplane that did not return, the silent spaces his voice no longer filled, the silent emptiness of my heart. I also learned that emptiness and fullness can coexist. Park View filled me as well. Some nights, four handsome young men serenaded me and my sisters. They stood on the landing of the enclosed stairway at Grandpa's house where we lived, pausing in their practice to sing a song especially for me. I was the Kentucky Babe of their song, born in the small Paintsville hospital where Loretta Lynn had her babies. They didn't sound like Loretta Lynn with the nasal, diphthonged-vowels of Eastern Kentucky. These four were the Park View Melodians. Their harmonies were good, four-part men's arrangements suitable for any Mennonite church. It was singing as it should be. No fancy vibrato, no instruments, no jazzy riffs, nothing that made you want to dance.

Early in the morning, Blue Jays in the maple trees outside my attic bedroom window woke me with their raucous debates, the kind of loud arguing we sisters were not to do. Since they were birds and not expected to act like us, I didn't judge them, but their sounds were discordant, unsettling to me. I preferred early morning quiet or at least the more decorous, perhaps more Mennonite, singing of robins and cardinals who also visited our trees.

If I ventured outside in the early mornings, I heard the scratchy sound of Grandma's hoe striking the hard Virginia clay, and the metallic ring when she hit a stone as she worked around beans or potatoes. The sound of her methodical work let me know that life was in order. Summer held many other sounds—the crisp snap of fat pea pods, and the almost musical plunk, plunk, as shelled peas fell into my pan, the miniature thunder crack of a ripe watermelon splitting open. There was the squeak of husks being pulled back from perfect ears of corn, and the bubble of boiling water as beans were blanched.

Summer rain played on the tin roof under which we slept—our attic bedroom the perfect sound chamber for every passing storm. Soft drops hit individually, surrounded by a fuzzy silence, but when it poured there was a

continuous drum roll, wave after wave, causing me to burrow down under the covers, even on hot summer nights. Sometimes the drops hit with such force I was convinced that the roof had come off at the edges and rain was actually falling into the closets under the eaves.

Not all sounds came from nature. Glass milk bottles clinked on the front porch. An occasional car passed on the street. The telephone rang. The refrigerator hummed. Dishes clinked in soapy dishwater. Sheets snapped on the clothesline. In winter the furnace thrummed in the basement, radiators pinged, tire chains crunched and jangled in the snow, and shovels grated on sidewalks. In the spring, I heard the high-pitched, tinny clatter of Uncle Daniel's tractor-pulled disk driving down College Avenue. Summer afternoons included the uneven put-put-put of the garden tiller, and the loose, rattly fit-fit-fit of the hand-pushed lawn mower. Screen doors banged. Virginia Ann clopped by on her horse. Ice crunched and the handle creaked as we took turns cranking the ice cream freezer. Water splashed into the claw-foot tub at the end of a day. All these sounds evidenced normal, ordinary life being lived.

The spaces between contained silences—a smooth, ripe tomato sitting on the window sill, noiseless, unless red itself is a sound; a perfect fuzzy peach in my hand waiting to be eaten; the quiet in the kitchen after jars had been removed from the canner and the dishes all washed—quiet punctuated by the satisfying metallic click of jar lids sealing; the voiceless night stars, looking cold and far away as we slept between dew-dampened blankets on the back porch balcony.

And there was music. We sang—at home, at church, at many social events. We attended afternoon choral programs at EMC. Even when we didn't go, the programs came to our house through the loudspeaker,¹ accompanied by occasional crackly static. During ministers' sessions of Virginia Conference, the singing from the speaker was heavily tenor and bass, with only a few brave pastors willing to sing the melody in this men-only gathering. But whatever the setting, our singing was always a cappella,

¹ The loudspeaker allowed every event in the EMC chapel that used the microphone system to be heard in the homes of seven or eight faculty members. A wire from an amplifier in the chapel basement, connected to the microphone system, was strung along public utility poles and run to faculty dwellings.

usually four-part harmony. It marked us as Mennonites. To me, unison singing sounded thin and poverty-stricken, something only for children or adults who “didn’t know any better.” We, being Mennonites, knew how to sing. Words figured large in our soundscape—lots of conversation and teaching and explaining, poems recited, stories told, family letters read out loud at the lunch table, more sermons than I care to count.

Almost every summer we traveled to my other grandparents’ Iowa farm. There I woke to the squeak of the water pump outside the back door, a sound that carried clearly through the fresh morning air. Downstairs were voices—Grandma’s soft, velvety one, Grandpa’s tenor tone that always sounded to me like it needed oiling, the aunts’ strong, lively voices, milk buckets clanking, pans and dishes clattering. A rooster crowed, cows bawled, pigs squealed. Apple trees were silent unless a breeze stirred their leaves. The hollyhocks next to the outhouse were silent too, but if I stood there quietly in the mid-day heat I could hear bees buzzing and maybe a few flies. An occasional car drove by, splatting out gravel from the dirt road. Marbles clattered down the wooden shoot of the marble roller. The telephone rang *long-short-short-long*, and whoever answered had to yell to be heard.

And always there was laughter, teasing, happy voices. In this lay the deepest meaning, although I didn’t understand it then. The love and joy carried in those voices came from deep springs of faith in the face of repeated loss and heartbreak—four children gone in early adulthood. I was hearing a credo, a song of joy for the overwhelming goodness of life, even in the face of tragedy.

The clock on Grandma’s dining room shelf, steady as a heartbeat, ticked the seconds and chimed the hours of those Iowa summer days. I add to it a list of other clocks of my life—the Regulator clock that marked the time, second by second, through every church service of my youth, often accompanied by the staccato of flies hitting the ceiling and lights; the jarring electronic jangle that marked the beginning and ending of classes in high school, the harsh buzz of time clocks at basketball games; the melodic tenor of the EMC bell tolling the hour on cricket-laced summer nights.

During the three years that Botswana in southern Africa was my home, I encountered sounds both new and old. The mournful cooing of Cape Turtle Doves sounded familiar, as did crowing roosters and barking dogs. I

was back sleeping under a tin roof—not much rain to hear. But the new sounds of hot cats on a tin roof, produced by visiting neighborhood toms and accompanied by yawls and rumbling tin as they chased each other, were an equal to any thunderstorm. And there were thunderstorms that teased us, rumbling in the distance for days, building tension higher and higher until finally pounding rain came, breaking the dry season.

On desert trips I remember the silence of vast stretches where nothing grew tall enough to offer shade from the parching, mid-day sun. In some places grasses whispered in the wind, and in others blowing sand made even softer sibilant sounds. At night we heard the distant, high-pitched, complaining call of jackals and the deep roar of lions. Walking to school in the village had its own set of sounds—full-throated greetings from open courtyards, goats bleating, children’s voices drifting from the schoolyard. I could measure the progress of the school day audibly: the bell ringing, singing, voices reciting lessons together, the clank of enamel lunch bowls, happy voices at recess, the swish of grass brooms sweeping the classroom at day’s end. Back at my house the church choir practiced next door, learning songs by tonic sol-fa just like my mother had done. They sang in four-part harmony and a cappella. Nights were mostly quiet except for the occasional running of the generator at the South Africa border post. Sometimes there was distant singing or drumming, but mostly there was silence to go with the vast starry sky.

I am now far from Kentucky hills, the Park View of my childhood, and African village life. My suburban northern Virginia community is a noisy place. Commuter and freight train whistles mark the hours. Garbage and recycling trucks bump, bang, and clash. A street sweeper swishes by. I hear the shrill arcs of fire and police sirens. Planes rumble overhead on their landing pattern to Dulles International. Cars pass in a steady stream, sometimes with subwoofers so loud they vibrate our whole house. Lawns are noisy with machines—mowers, blowers, whackers, edgers, sometimes even a chainsaw. Inside, the air conditioner mutes the songs of birds and cicadas. The clothes dryer thumps and bumps, the blender squeals, and legions of electronic beeps and bleats demand my attention.

But there is continuity in sounds—the refrigerator hums, the tiller puts in our small garden, cardinals and robins sing. Ripe tomatoes proclaim

their silent redness on my windowsill. Bumble bees visit flowers, and crickets fill the night with their pulsing chorus. When it is quiet I can hear our garden fountain, and with every breeze I hear our wind chimes, remarkably similar to the college bell ringing out over Park View. And there is silence. I have to wait for it, listen for it, make space for it in my busyness, but it is still there—waiting under every other sound. As I settle into it, my heartbeat emerges like a faithful clock marking each moment of my life. And beneath it is deeper silence, a Fullness, a Presence, a Goodness much larger than myself. It surrounds me; it holds me; it calls me to keep listening to Life.

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Sounding Spaces: *Lange Wies*, Community, and Environment

Judith Klassen

Recent efforts to engage environment and space in ethnomusicological discourse have led to a burgeoning “ecomusicology,” what Jeff Todd Titon has called “the study of music, culture, sound, and nature in a period of environmental crisis.”¹ Following literary criticism, the discipline began as a space for the study of musical interactions with nature or musical text (composition) as a representation of nature. More recent developments have expanded this frame substantially to examine musical, cultural, and environmental sustainability and to problematize a static understanding of “nature” in related studies.² In this paper, I will build on Titon’s notion of sustainability as dynamic permanence, examining points of convergence between song and environment, and paying particular attention to relationships between so-called simple living and soundscape in Old Colony Mennonite *lange Wies*, a Low German expression meaning “long melody” or “long way.”

Lange Wies

Lange Wies has long been associated with Old Colony church and community life. The song form is no longer universally practiced in North American Old Colony churches, but it remains foundational to many congregations in northern Mexico. It is within that region, where I conducted doctoral fieldwork in 2006,³ that this examination of sound, community, and environment is situated. The literal translation of *lange Wies* as “long melody” or “long way” describes both the distinctive style in which conserving Old

¹ Jeff Todd Titon, “The Nature of Ecomusicology,” *Musica e Cultura: revista da ABET* 8, no. 1 (2013): 8-18.

² Ibid., 11. See also Aaron S. Allen, “Ecomusicology [ecocritical musicology],” *The Grove Dictionary of American Music* 2nd ed., ed. Charles Hiroshi Garrett (Oxford: Oxford Univ. Press, 2013).

³ Judith Klassen, “Encoding Song: Faithful Defiance in Mexican Mennonite Music Making” (Ph.D. dissertation, Memorial University of Newfoundland, 2008).

Colonists sing hymns during worship, and the melismatic (multiple notes sung to one syllable of text) and orally-transmitted melodies associated with song texts in the Old Colony hymnal, *Gesangbuch: Eine Sammlung geistlicher Lieder zur Allgemeinen Erbauung und zum Lobe Gottes*. Charles Burkhardt and Wesley Berg have written about *lange Wies* and its function in Old Colony worship in Mexico and Alberta, respectively. Underscoring the historical lineage of the long melodies, Burkhardt uses *alte Wiese* (High German: “old melodies”) to describe them,⁴ while Berg uses *oole Wies(e)* (Low German: “old melodies”).⁵

As a musical repertoire, long melodies are distinctive in several ways. Though orally transmitted, each melody has an assigned number. These numbers are listed in the *Melodien Register* of the *Gesangbuch* and are associated with particular hymn texts. While there are also *korte Wiese* (Low German: “short melodies”) associated with each melody number in the *Gesangbuch*, it is the long melody repertoire that is used by conserving Old Colonists in worship. Song leaders, or *Vorsänger*, are charged with maintaining the long melodies on behalf of the community. To that end, they meet together during the week to review and prepare for Sunday morning. During the worship service, they sit at the front of the sanctuary—facing the congregation—and call out the hymns to be sung. The focused nasal timbre used in singing *lange Wies* serves to draw in congregational voices, who follow the lead of the *Vorsänger* at the start of each hymn. At phrase endings, the congregation falls silent in order to enable the *Vorsänger* to lead them into the next line of text. Long melodies are sung in unison; however, their melismatic form and the related absence of regular meter or pulse make their learning and retention complex.⁶

⁴ Charles Burkhardt, “The Church Music of the Old Order Amish and Old Colony Mennonites,” *Mennonite Quarterly Review* 27 (1953): 34-54. See also Charles Burkhardt, “The Music of the Old Order Amish and the Old Colony Mennonites: A Contemporary Monodic Practice” (Master’s Thesis, Colorado College, 1952).

⁵ Wesley Berg, “Hymns of the Old Colony Mennonites and the Old Way of Singing,” *The Musical Quarterly* 80, no. 1 (1996): 77-117. See also Wesley Berg, “Old Colony Mennonite Singing: Old Songs in a New Land: Russian Mennonite Hymns Come to Manitoba,” in *Old Colony Mennonites in Canada: 1875-2000*, ed. Delbert F. Plett (Steinbach, MB: Crossway Publications Inc., 2001), 23-24, originally published in *Preservings* 16 (2000): 44-45.

⁶ For further details regarding *lange Wiese* and their historic and social significance, see Helen Martens, “The Music of Some Religious Minorities in Canada,” *Ethnomusicology* 16, no. 3

Attesting to the challenge of retaining the melodies and to the alternate literacy involved in learning them, *Vorsänger* Abram Wolf recalls:

Ich weiss einen [Vorsänger], aber der is lange gestorben, der konnte neun und neunzig Melodien. . . . Die Hunderste hat er auch noch wollen lernen, aber, das war nicht vollbracht. Ja das—dieser Melodien alle lernen, das meint—pass auf! Und, weil wir haben nichts zum beschauen auf Zahlen oder wie—man muss nur wissen, horchen. Und der selbe der tut das üben, und andere der tut das folgen.⁷

I know one [songleader], but he is long dead, he knew 99 melodies. . . . The hundredth he also wanted to learn, but it was not to be. Yes—these melodies, to learn them all, that means—look out! And because we do not have anything to look at—like numbers—one must just know how to listen. And we do the practicing, and others do the following.

Describing the process of learning the *lange Wies* as “etwas schwerer als Glaubens Lieder” (somewhat more difficult than belief songs),⁸ Wolf emphasizes that learning a new melody is a slow process that, like participation in Old Colony community life, requires commitment:

Das ist nicht in einen Abend getan. [Laughter]. Das muss drei, vier mal. Und dann, es selber zu Hause allein, wo mich kein, niemand hören würde das probieren. . . . Ja, ich habe zu Hause auch noch etliche gelernt. Na, erst sie von abhören, und dann—so bei dem arbeiten so denkt man, “Wie würde das gesungen?” Und dann geht man, nimmt sich das Buch, und dann mal selbst, “mal sehen,” [demonstrates with Gesangbuch] probieren ob man kann.⁹

(1972): 360-71. See also Burkhart and Berg.

⁷ Abram Wolf, interview by author, Manitoba Colony, Mexico, February 15, 2006.

⁸ The hymnal used by the *Kleine Gemeinde* church in Northern Mexico is called *Glaubens Lieder*. The strophic nature and minimal use of melisma in *Glaubens Lieder* hymns makes their melodies easier to retain than *lange Wies*; the *Glaubens Lieder* hymnal uses shaped notes to indicate pitch.

⁹ Abram Wolf, interview, 2006.

That is not in one evening done. [Laughter]. That must be done three, four times. And then, try it out by myself at home, where nobody can hear me practice. . . . Yes, I have also learned quite a few at home. First from listening, and then—while working one thinks, “How was that sung?” And then one goes, takes the book [hymnal], and then by oneself, “let’s see,” [demonstrates with Gesangbuch], find out if it works.

Social Interaction, Social Effects, and Environment

The retention of *lange Wies* by many Old Colony churches is consistent with community values of simplicity, nonconformity, and commitment to the *oole Ordnunk* (Old Order). At the same time, the singing of *lange Wies* is performative, with what ethnomusicologist Jane Sugarman refers to as social effects, whereby performance forms are understood “both as structured by a range of shared meanings, and as structuring, in their capacity to shape ongoing social formations.”¹⁰

In the singing of *lange Wies*, Old Colonists perform a particular meeting of performance style, kinesthetic practice, and social effect. Engaging vocal production techniques requiring “a long breath” in a melismatic song form that prizes continuity of sound in its performance, long melodies are difficult to learn and even more difficult to sing solo. This difficulty is not just an embodiment of humility but a physical limitation identified by singers of the complex melodies. In a community that prizes collectivity and lived belief, this seems significant: Are the *Wies* an enactment of societal value through aesthetic choice, or do the melodies just happen to be “long” and best sung in groups? Do the melodies reflect inevitable changes in a collectively-practiced oral tradition through time, or are their aesthetic features intentional?¹¹ Conversely, is it significant that the same characteristics that reflect ongoing community cohesion in this genre (oral transmission, absence of visual

¹⁰ Jane Sugarman, *Engendering Song: Singing and Subjectivity at Prespa Albanian Weddings*, Chicago Studies in Ethnomusicology (Chicago: Univ. of Chicago Press, 1997), 27.

¹¹ Nicholas Temperley’s “pitch-matching theory” argues that long melodies are the result of a long history of separation from other musical influences. Nicholas Temperley, “The Old Way of Singing: Its Origins and Development,” *Journal of the American Musicological Society* 34, no. 3 (1981): 511–44.

cues, introduction during childhood) make it difficult for “outsiders” to participate? And, finally, what might all of this say about the complexity of so-called simple living?

Lange Wies can be regarded as the product of an oral tradition, shaped by its integration into the life of a community; it can also be seen as a practice that shapes and is shaped by a specific built environment. Upon arrival in Mexico in the 1920s, conserving Old Colonists brought with them the building techniques and architectural styles common in the western Canadian Mennonite villages from which they had come. However, they soon adapted their built structures to respond to environmental conditions and material costs in Mexico.¹² Adobe was adopted in the early years, followed later by concrete structures with metal roofs.¹³ Consistent throughout these material changes was an emphasis on simplicity of form: church walls remained unadorned (save for windows for natural light); wooden church pews remained backless and rested on a painted floor. The de-emphasis on elaborate visual ornamentation within the sanctuary has continued into the 21st century and is consistent with the importance placed on lived belief.

Roland Sawatzky, Curator of History at the Manitoba Museum, uses the term *orthopraxis*, “correct practice,” in reference to Mennonite domestic architecture in Manitoba, underscoring connections between sacred experience and everyday life.¹⁴ A similar framework can be used in this context. For Old Colonists, faithfulness is explicitly tied to “correct practice,” as it is through the practical choices made in day-to-day life that commitment to the church is expressed. In the Old Colony sanctuary, *orthopraxis* impacts not only one’s visual and tactile senses but also the soundscape of worship. While in Western classical traditions a nasal timbre is often taken to be the antithesis of “blending,” the acoustic result of Old Colony church architecture is a live space that enables participants to sing full voice without standing out. Here it is useful to consider connections between song practice, community, and environment, and in particular

¹² Harry Leonard Sawatzky, *They Sought a Country: Mennonite Colonization in Mexico* (Berkeley: Univ. of California Press, 1971), 272-78.

¹³ David M. Quiring, *The Mennonite Old Colony Vision: Under Siege in Mexico and the Canadian Connection* (Steinbach, MB: Crossway Publications Inc., 2003), 40.

¹⁴ Roland Sawatzky, “The Control of Social Space in Mennonite Housebarns of Manitoba, 1874-1940” (Ph.D. dissertation, Simon Fraser University, 2005).

what sustainability and a relational epistemology of ecology might look like in this context. Is it possible that values of *orthopraxis* are embodied not only in repertoires and song forms but also in community infrastructures (like buildings) that contribute to social cohesion?

Titon speaks of sustainability as dynamic permanence: “The elements in the system, their proportions, structures, relations, and functions will vary; but the system itself is permanent for practical purposes in the foreseeable future, though not for eternity.”¹⁵ This is a simple and useful reference point when conceiving Old Colony life and music making. While non-conformist Mennonite communities in Mexico have frequently been framed as unchanging, monolithic, and static,¹⁶ the church is more usefully conceived as a system that is sustainable through the dynamic nature of its parts—what diaspora theorists might refer to as stance rather than entity; a chosen position, not a “thing.”¹⁷

So, how does an ethnomusicology of the environment—accounting for sustainability and relational epistemology—play out in this space? Continuity and change in worship and song practice reflect dynamic engagement with physical and cultural environments in Old Colony worship: the oral transmission of *lange Wies* has begun to be supplemented by cassette tapes made by community members in order to enable retention and practice outside of Sunday morning services; unison singing and proscription of musical instruments during Sunday worship remain, but *korte Wies*, instruments, and even singing in parts can be heard in some homes and youth gatherings; and while services continue to be held in High German (the language of church and school), some pastors use Low German to elucidate points made in their sermons.

In the past, I have referred to these apparent inconsistencies as “faithful defiance”—cultural expressions that defy community proscriptions but in fact support the community’s very fabric.¹⁸ Here, they can also be framed as part of a sustainable and dynamic permanence. Connections between belief and engagement with the physical environment are ongoing.

¹⁵ Titon, “The Nature of Ecomusicology,” 10.

¹⁶ See, for example, the film by Carlos Reygadas, *Stellet Licht* [Silent Night] (eOne Films, 2008).

¹⁷ Rogers Brubaker, “The ‘Diaspora’ Diaspora,” *Ethnic and Racial Studies* 28, no. 1 (2005): 1-19.

¹⁸ Klassen, “Encoding Song,” 2008.

Nonconformity and “simple living” shape physical infrastructures and their uses, but the results are neither static nor unchanging. Inside the church, a minimalist architecture and unadorned sanctuary enable an acoustic that is all-encompassing. Dynamism is equally evident outside: hitching posts remain but they now organize cars and pickups rather than horses. That church services begin one hour after sunrise also points to tangible connections between community life and the so-called natural world, but this is not uncomplicated. Agrarian life and chosen simplicity are not only about a life rhythm tuned to “nature’s clock” but about breaking land, drought, poverty, land scarcity, and related social challenges. Similarly, the move from Canada to Mexico was about hope for a new start without government intervention (building non-conformist communities), yet it brought with it tensions with rural Spanish Mexican populations.¹⁹ Conceptualizing social and musical context vis-à-vis more traditional understandings of nature, place, and environment points to tensions between perceived stasis and dynamic change, and underscores challenges alluded to in Titon’s reference to environmental crisis.²⁰

Conclusions

Ongoingness and sustainability in Old Colony communities are not about stasis, nor is the complex of sound and environment a thing that can be fully known. Congregational singing occurs in unison, with a vocal timbre that enables full participation by individual singers and results in a rich collective sound. The development of vocal competence “is not in one evening done,” nor are the tunes of *lange Wies* “catchy.” Still, the ongoing investment of *Vorsänger* and community members makes this sustenance possible. Whether named as such, whether chosen or not, this requisite intentionality shapes and is shaped by community participation and functioning, with a social effect (to return to Sugarman’s terminology) of sustaining community cohesion through song. Connections between sound, belief, and environment are written into this cohesion.

The commitments of Old Colonists to continuity, tradition, and the

¹⁹ Martina E. Will, “The Mennonite Colonization of Chihuahua: Reflections of Competing Visions,” *The Americas* 53, no. 3 (1997): 353-78.

²⁰ Titon, “The Nature of Ecomusicology,” 8.

oole Ordnunk are not exclusive to song practice but extend to such areas as language use, clothing, education, and the adoption of new technologies. It is not just long melodies that have been sustained through time but a particular sonic environment as well. The soundscape during Sunday worship is created by human voices singing *lange Wies* and facilitated by the acoustic character of Old Colony building methods and aesthetic decisions. The resulting sound is neither a calculated aesthetic choice nor a by-product of non-conformist faithful living. Instead, it is part of a complex ecosystem involving belief enacted through practice. Such a reading is not an end in itself but an example of dynamic permanence.

Stephen Marini, a historian of religion, has suggested that hymnody may be considered “a medium of religious culture—a complex of acts and psychological effects, texts and vocal techniques, group behavior and ritual gestures—that expresses for worshipers the universe of sacred meaning,”²¹ asserting further the “protean ability of hymnody to express virtually everything about a religious tradition.”²² I do not seek to assign total and inclusive meaning to hymnodic practice among Old Colony Mennonites; however, Marini’s work resonates with this examination of *lange Wies*. Placed in counterpoint with music analyses that take seriously the relationships between sound, place, and environment, the significance of the form in expressing Old Colony understandings of community extends beyond its sonic character. By considering aspects of community life in relation to sound production and physical space, we can see that despite the apparent clarity of non-conformist practices and lifeways, there is very little that is “simple” about “simple living.”

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²¹ Stephen A. Marini, “Hymnody and History: Early American Evangelical Hymns as Sacred Music,” in *Music in American Religious Experience*, ed. Philip V. Bohlman, Edith L. Blumhofer, and Maria M. Chow (New York: Oxford Univ. Press, 2006), 134.

²² Ibid.

“What you intended to say”: Howard Dyck Reflects on Glenn Gould’s *The Quiet in the Land*

Doreen Helen Klassen

The Quiet in the Land is a radio documentary by Canadian pianist and composer Glenn Gould (1932-82) that features the voices of nine Mennonite musicians and theologians who reflect on their Mennonite identity as a people that are *in* the world yet *separate from* it. Like the other radio compositions in his *The Solitude Trilogy*—“The Idea of North” (1967) and “The Latecomers” (1969)—this work focuses on those who, either through geography, history, or ideology, engage in a “deliberate withdrawal from the world.”¹ Based on Gould’s interviews in Winnipeg in July 1971, *The Quiet in the Land* was released by the Canadian Broadcasting Corporation (CBC) only in 1977, as Gould awaited changes in technology that would allow him to weave together snatches of these interviews thematically. His five primary themes were separateness, dealing with an increasingly urban and cosmopolitan lifestyle, the balance between evangelism and isolation, concern with others’ well-being in relation to the historic peace position, and maintaining Mennonite unity in the midst of fissions.² He contextualized the documentary ideologically and sonically by placing it within the soundscape of a church service recorded at Waterloo-Kitchener United Mennonite Church in Waterloo, Ontario.³

Knowing that the work had received controversial responses from Mennonites upon its release, I framed my questions to former CBC radio producer Howard Dyck,⁴ one of Gould’s interviewees and later one of his

¹ Bradley Lehman, “Review of Glenn Gould’s ‘The Quiet in the Land,’” www.personal.umich.edu/~bpl/QITL.htm, accessed January 14, 2015. Lehman describes “The Idea of North” as “a journey into solitude, through the metaphor of Northern geography and climate” and “The Latecomers” as “a study of the isolation of Newfoundland.”

² Ibid.

³ A recording of *The Quiet in the Land* is available at www.cbc.ca/player/RADIO+HOLDING+PEN/Glenn+Gould+-+The+CBC+Legacy/Audio/1970s/ID/2134812561/, accessed February 17, 2015.

⁴ Howard Dyck is a former program host of CBC Radio One’s “Choral Concert” and “Saturday

confidants, from this perspective. In our January 2015 phone conversation, I asked Dyck about his personal involvement with this project, his level of awareness as to how Gould would reconstruct the interview material, and his general understanding of Gould’s objectives for the work.⁵ What follows are excerpts from that conversation.

DHK: How did you get involved with Glenn Gould’s *The Quiet in the Land*?

HD: I had just come off two tumultuous years teaching at the Mennonite Brethren Bible College (MBBC) in Winnipeg. Musically they were two wonderful years, but I had had a running battle with the president when this opportunity came along. One day I got home from my summer job and my wife Maggie said this guy had called and said he was Glenn Gould. Maggie almost hung up on him, thinking it was just a prank, but then she thought it sounded as though [he] was for real, so she talked to him and found he wanted me to give him a call. So I did. He said he was doing a radio documentary, as he called it, and I had been suggested as a person he might talk to. This would have been in July of 1971, long before I had any involvement with the CBC.

We had agreed to meet at the CBC studios in Winnipeg, so I went there on a blistering hot July day and was ushered into a large studio with a grand piano. And there was Gould, wearing his heavy winter coat and boots and a scarf, but his mittens were lying on the piano because he was playing when I walked in. I think he was dressed that way because he knew the place was air-conditioned and he had a mortal fear of air-conditioning, but he was very cordial. We had never met before, but he immediately tested me by asking, “What am I playing?” I listened for a while, but had no idea specifically what he was playing. It occurred to me that it had to be very late romantic and it seemed that it wasn’t piano music. It turned out that I was right. He was playing Richard Strauss’s *Elektra*. There was not a scrap of music in front of him, but he was singing all the parts. Then we got on with our conversation. That’s sort of how it started.

Afternoon at the Opera.” His international conducting career has taken him to twenty countries on three continents.

⁵ Telephone interview with Howard Dyck, January 22, 2015.

We met at least two times, and both times would have been about two hours, so about four hours of recorded conversation. In the end, I would say, my part in that documentary would be a maximum of two-and-a-half or three minutes, but he did that with a number of other people as well.

I know you were wondering who had supplied him with the names of whom to interview, and I don't know that exactly. I have a very strong hunch it might have been Ben Horch, because Ben was a CBC producer in those years.⁶ Certainly [possible], because Esther, Ben's wife, was also one of the people Gould interviewed, as was Esther's brother Clarence Hiebert.

DHK: Right. I found it curious that Clarence, who was living in Hillsboro, Kansas, was part of that.

HD: Well, that would have been for theological reasons, I guess, but I don't know that for sure. As I said, this was in July of '71. I had found a job in Winnipeg, teaching music at Elmwood High, but about a month into that job an opening came up at Wilfrid Laurier, then called Waterloo Lutheran University, here in Waterloo. And so, on extremely short notice, one week to be exact, we packed up everything with our two children. When I was talking to Gould back in July, I had no idea that we would soon be near Toronto where he was based. When he began editing his recorded interviews, that's when the long middle-of-the-night phone calls ensued. You see, he had recorded all these different voices—there must be half-a-dozen or eight in that documentary—and he had recorded them all separately. I mean, none of us ever were in the same room together.

It was strictly he and I chatting. His voice never ever shows up in the documentary, but it was a two-way conversation. Then he would splice these things together and create this kind of quasi-dialogue between and among these various characters, so that you have to pay very close attention when you listen because there's so much going on. In that sense, it reflects exactly the kind of mind Gould had: able to engage in an intense conversation on the phone while also reading magazine articles.

As he was putting all this together, he would take a little phrase, let's

⁶ Peter Letkemann confirms that it was Ben Horch who suggested potential interviewees to Gould. See Peter Letkemann, *The Ben Horch Story* (Winnipeg: Old Oak, 2007), 373.

say two-thirds into our conversation, and place it ahead of something I had said earlier. Then he would call me, often in the middle of the night, and say, “OK, I’m going to play you something on the telephone here, things that I’ve put together. Here’s what you said.” He would play me the original, with a little bit of a context, a paragraph or two, on either side of my particular comment that he wanted to use. Then he would say, “Now, I’ve taken these two tiny little bits, and I’ve inverted them. I want you to listen closely to them so that as a result of messing with the chronology I don’t have you say something that you didn’t mean to say.” He was very scrupulous about that.

DHK: Apparently, some interviewees felt their comments had been misrepresented, but you sensed [Gould’s] genuine concern about representing people.

HD: Absolutely. Certainly in my case. He called me more than once to say, “Look, the way I put this together, is this in fact what you intended to say?” As I recall, there was never any doubt. I mean, he nailed it each time. I was incredibly impressed by how well prepared he was coming into the first interview. He obviously had done a lot of reading about Mennonites, understood the kind of ethos of Mennonites had, and anticipated some of the things I was about to say.

Here I was, a young guy 28 years old at the time, trying to find my way professionally. For two years I had been in a good situation in certain ways, but it was also a bit of a sequestered environment, and I was really having to decide whether this was what I would want for the rest of my career. I had been thinking a whole lot about being an artist in a society, in an environment that is by definition somewhat separate. He related to that very, very intimately, because of course he was always an outsider and a loner. He had a very deep sympathy for this kind of thing, and in fact that’s why he later said that these three radio documentaries—which he called *The Solitude Trilogy* and included *The Idea of North*, *The Latecomers*, and finally *The Quiet in the Land*—were as close to an autobiography as he would ever get. He felt that they sort of told his story or described the way he felt about the world.

DHK: You mentioned Gould's concern with representing your ideas fairly, so I found it of interest that Gould quotes you as saying: "And that's really what great art is all about, isn't it? I mean, that's what a fugue, ultimately, is all about—using, if you will, the techniques that the composer had at his disposal and making something of it which is really quite other-worldly."⁷ This comment is placed immediately after a section of *The Quiet in the Land* for which Gould wrote a composition in the style of Bach because the recording he'd planned to use didn't fit. Did you have any idea that Gould was going to place your comment in juxtaposition to his Bach-like composition?

HD: No. I had no idea at all, none whatsoever. I don't remember what got me to say what I did there. I do know he had originally intended to use the Pablo Casals recording of Bach's cello suites, but there was a problem with the key, with the tonality; he was trying to match it to Janis Joplin.

DHK: Her "Mercedes-Benz" song?

HD: Exactly, and it just wasn't working out, so he decided to compose a little music that would sound right.

DHK: Did Gould discuss that short composition with you?

HD: No, certainly not at the time of the interview. I doubt that Gould himself knew what all was going to happen, but considerably later he mentioned something about the cello suites not having worked out and so he had written something.

I should mention that there was a long delay between the interviews of 1971 and the actual broadcast of *The Quiet in the Land* in 1977. One major reason was related to changes in technology. In the early '70s, the CBC and others generally in technology were thinking the next big thing was going to be quadraphonic sound. Stereophonic sound had taken over, but Gould was very excited about quad and wanted this radio documentary to be in

⁷ Cited in Matthew McFarlane, "Glenn Gould, Jean Le Moyne and Pierre Teilhard de Chardin," first published in *Glenn Gould Magazine* 8, no. 2 (Fall 2002). Available at http://cec.sonus.ca/econtact/7_3/mcfarlane_visionaries.html, accessed January 15, 2015.

quadraphonic sound. In fact, in his initial editing he was already assuming there would be four channels. Then, when it became clear that quad was not going to happen, he revamped his plans and was stuck with *mere* stereo. But with clever editing and mixing of channels, he created the illusion of at least three channels: the two speakers, and a voice coming out of the middle as well. If the speakers are placed right, you could swear you are hearing one voice coming right from dead center between the two speakers. So, that’s what he worked with, and he described some of these later, particularly *The Quiet in the Land*, as a trio sonata, where you had a low voice, a high voice, and a middle voice. You often hear those textures coming at you more or less simultaneously. It was because quadraphonic wasn’t happening that he had to sort of change gears, and that was one of the major reasons for the delay.

DHK: You mentioned the trio sonata, and what came to mind was Ben Horch’s ideas for the *Mennonite Piano Concerto*, where the piano takes the role of the preacher and the orchestra the role of the congregation responding to the preacher. Did Gould regard the three voices as a way of allowing the community rather than an individual to speak, or was this more a way of using the technology?

HD: I think he was more aware of using the technology and creating the illusion of a conversation. I’m not sure that by interposing the voices the result had any philosophical, theological, or sociological significance for him.

DHK: So, it was conversation rather than expressing community for him.

HD: Yes, I think so.

DHK: And he himself called it “contrapuntal radio,” didn’t he?

HD: Yes, he did, absolutely. And he increasingly came to think of these three documentaries as compositions. Of course, they were documentaries, but I think he thought of them as a little more innovative than a mere documentary.

DHK: So, he was essentially experimenting with the technology to create a vocal counterpoint?

HD: Absolutely! He was obsessed with technology and would have loved digital technology. He would be hunched over editing equipment at the CBC studios, with his technician and a razor blade, and cutting tape. Of course, now, he would have just loved what he could have done.

DHK: I want to get back to his focus on the Mennonites. Did Gould discuss with you a particular reason for choosing the Mennonites for part of his trilogy?

HD: He certainly did. He was intrigued with the idea of there being a community that lived within another larger community, in a larger context, in this case, Winnipeg, and deliberately chose Winnipeg because it has such a large Mennonite population. He was interested in how a group like that, where its own identity was fairly clearly drawn for a number of reasons—theological, certainly, but other reasons also, such as cultural and ethnic, and to a lesser extent, linguistic—how a community like that could nevertheless function productively and positively in this larger context. That intrigued him and that is why, I think, he focused on the Mennonites for this one, because in the case of his first documentary, *The Idea of North*, the separateness was clearly established by geography, yet he says the inferences in that documentary were not only geographical but a state of mind. He says it's the *idea* of north, the feeling of being separate, not only the place of north, so it becomes as much a state of mind as a geographical reality that defines it. In the case of *The Latecomers*, it's once again geography, in that Newfoundland is an island, whereas in *The Quiet in the Land* you had a group that was separate in a way yet was in the middle of things. It addressed a whole new dimension of this notion of separate identity and a different kind of isolation altogether.

DHK: I'm still curious about these conversations with you in the middle of the night. Were they generally about the editing process?

HD: No! That was the jumping-off spot, and sometimes, as I recall, these conversations would go on for an hour or two, and they were pretty much a monologue. Sometimes it would be current things happening politically that would get him going. Along the way there would be something specific to the documentary, but on one or two occasions he didn’t talk about the editing or the documentary at all; he just wanted to talk. There would always be talk about music, and that would lead to talk about history, literature, and theology, in which he was well versed. You know, in his day he was regarded as one of the leading authorities on settlement of the north shore of Lake Superior, what he called “The Group of Seven” country.⁸

DHK: What other thoughts do you have about *The Quiet in the Land*?

HD: You know that the whole documentary, *The Quiet in the Land*, takes place in the framework of a church service, recorded here in Waterloo at a Mennonite church, possibly before he did all of the interviews, and that’s kind of intriguing. That may have been for practical reasons, Waterloo being a lot closer to Toronto than Winnipeg.

DHK: What about the structure of the five scenes, demarcated by parts of the church service? Do you remember him talking about those themes?

HD: No. That kind of thematic delineation never came into those first interviews. It was just that he wanted to know how it felt for a young guy like me, fresh out of music conservatory in Germany and with all sorts of ideas and ambitions, to work within a community that had certain boundaries. That is what intrigued him, but the conversation did go to things like the pacifist dimension. We talked at length about that, and it was very clear to me that he was very sympathetic to the Mennonite position in that regard. So, we would have talked at length about those issues, but never did he at the time indicate to me that the whole thing would take on a certain framework. I’m actually intrigued with whether he would have known at the time. It may just be that as he was listening to all of these conversations something

⁸ The Group of Seven, famed landscape painters of the 1920s, initiated the first major Canadian national art movement.

emerged in his mind, but I don't know. On the other hand, he may have known all along what he wanted to do.

DHK: I've read about Gould's rather open-ended interview questions and wonder how he managed to delineate such strong themes from them. For example, questions about the interrelationship between fantasy and the "real" world, or if knowledge of the world helped or hindered.⁹

HD: That's interesting, as he never asked me such specific questions. On one occasion he said he had tried to keep the questions as open-ended as possible. He just wanted people to start doing sort of stream-of-consciousness thinking and talking, because he felt that if the questions became too specific, they would elicit answers the interviewee thought he expected, and he didn't want that.

DHK: Gould's open-ended questions certainly resulted in an insightful work that we couldn't have anticipated when as teenaged piano students we first encountered his recordings, writings, and, in your case, performances.

HD: Well, you know, it's now 44 years ago that Gould interviewed me. I knew about Glenn Gould. He was a legendary figure even in 1971, and as a student at MBBC in the 1960s, I heard his last performance in Winnipeg in the Civic Auditorium. He played Bach, a Beethoven sonata, and some second Viennese School stuff—you know, Berg, Webern, Schoenberg. I was aware of him, also of his Goldberg Variations of 1955, and all of that. He was this *Wunderkind*. But at the time I had no idea that he would interview me, nor that I would later interview him in my work at the CBC.

Years later, after we came back to Canada, I'd get back to Germany from time to time, and whenever people realized that I not only knew *about* Glenn Gould, but also had done all this work together *with* him, they would just crowd around, and I would have to tell them every last little thing that I knew about Glenn Gould, because he was a cult figure in Europe, and, I think, probably still is.

⁹ See McFarlane, "Glenn Gould, Jean Le Moyne and Pierre Teilhard de Chardin" for a list of Gould's interview questions.

DHK: And to think that this very piece about Mennonites was brought to the Sound in the Land conference by yet another German, Sabine Breitsameter!¹⁰

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¹⁰ See Sabine Breitsameter, “Ordering of Sounds: The Homogenization of Listening in an Age of Globalized Soundscapes,” *The Conrad Grebel Review* 33, no. 2 (Spring 2015): 142-151.

Listening to the Land through Rudy Wiebe's Fiction

Ann Hostetler

In the Buddhist tradition, the Buddha sits under the Bodhi tree, waiting for enlightenment, on the forty-ninth day of his self-imposed fast and meditation. Mara, the master of demons, brings a host of his minions to unseat the Buddha, challenging his right to sit under the tree on the earth.¹

“You are a being of spirit—earth is my realm,” Mara says.

“No, I belong here,” the Buddha insists.

“Who will vouch for you, then?” asks Mara.

Buddha, with his left hand reaching to the sky, lowers his right hand to the earth.

“I am his witness,” says the earth.

At this, Mara and his demons disappear.

When I heard this story recently, I thought of Rudy Wiebe, one hand raised to the Mennonite narrative within the Christian story, the other reaching to the ground, invoking our embodied existence as earthly creatures. In confirmation of this emphasis in his work, his memoir is entitled *Of This Earth*.²

The sound of the land is everywhere in Wiebe's writing. In his first novel, *Peace Shall Destroy Many*, four “Preludes” keyed to the seasons

¹ The story of Mara challenging Buddha is very common in Buddhist literature. I first heard it orally, in the context of a yoga workshop. The version that follows is my retelling. The story is referenced this way in *The Princeton Dictionary of Buddhism*: “When Māra questioned the bodhisattva's right to occupy his seat beneath the Bodhi tree, the bodhisattva declared that he had earned that right by accumulating merit over countless eons. When asked who could vouch for these deeds, the bodhisattva extended his right hand and touched the earth, thereby calling the goddess of the earth, Sthāvarā, to bear witness to his virtue; this gesture, called the bhūmisparśamudrā (“earth-touching gesture”), is one of the most common iconographic depictions of the Buddha. The goddess bore witness to the bodhisattva's virtue by causing the earth to quake.” See *The Princeton Dictionary of Buddhism* (Princeton, NJ: Princeton Univ. Press, 2013).

² Rudy Wiebe, *Of This Earth: A Mennonite Boyhood in the Boreal Forest* (Toronto: Vintage Canada, 2007).

invoke the cycles of nature in contrast to the narratives of theology on the one hand, and those of technological progress and conquest on the other.³ The first prelude, "Spring," introduces the novel with a portrait of two boys playing hooky on a fine spring day to hunt for frogs, delighting in the natural world. Thom Wiens, the protagonist, listens to the land in concert with the thoughts in his mind and the airplanes overhead. Wiebe portrays him as an earth being engaged with existential thoughts. And his ability to listen to the land opens his mind to the narratives of its other inhabitants—namely the Indian children his mentor and teacher Joseph is so intent on saving—by breaking with tradition and speaking the scripture in English rather than in the traditional Mennonite German. The discovery of a fragment of an extinct wood buffalo's skull prompts Wiens's epiphany—that perhaps Canada is a young country only in the eyes of some, but an ancient place in the eyes of others. Thus, attentiveness to the land opens a space of encounter—a contact zone, as Mary Louise Pratt describes it—in which characters and, by extension, readers become aware of the limits of received narratives and can begin to consider other approaches.⁴

Wiebe's evocation of the sounds of nature occur most vividly in his poetic descriptions of his childhood in the boreal forest, but as he describes it in his short memoir essay, "Passage by Land," his discovery of the contrasting southern Alberta prairies in his early teens inspired him to write fiction.

[T]o break into the space of the reader's mind with the space of this western landscape and the people in it you must build a structure of fiction like an engineer builds a bridge or a skyscraper over and into space. A poem, a lyric, will not do. You must lay great black steel lines of fiction, break up that space with huge design and, like the fiction of the Russian steppes, build a giant artifact. No song can do that; it must be giant fiction.⁵

Yet, by the author's own admission in "The Skull in the Swamp," many

³ Rudy Wiebe, *Peace Shall Destroy Many* (Toronto: McClelland & Stewart, 1962).

⁴ Mary Louise Pratt, "Arts of the Contact Zone," in *Profession 1991* (New York: Modern Language Association, 1991), 33-40.

⁵ Rudy Wiebe, "Passage by Land," in *River of Stone: Fictions and Memories* (Toronto: Vintage Canada, 1995), 1-4.

of his fictions are pastiches or elaborations of fragments.⁶ Narrative builds the architecture, but the scenes and sounds of the outdoors capture and hold the reader, evoking a dimension beyond words.

Wiebe also uses the lyrical fragment—or the poetic nature passage—in other settings where Mennonites have wandered. His descriptions of the Chaco and the Lengua women of Paraguay in *The Blue Mountains of China*⁷ have inspired songs by Carol Ann Weaver in her song cycle *Paraguay Primeval*.⁸ However, the boreal forest is Wiebe's most persistent earthly muse. Canada's extreme north is evoked in the opening pages of *A Discovery of Strangers*,⁹ a text Weaver also set to music in her composition "North of Centre."¹⁰ Wiebe revisits the boreal forest at the beginning of his most recent novel, *Sweeter than All the World*, in a passage that both evokes the sensory presence of nature and foregrounds the problem of language through another of his key characters, Adam Peter Wiebe, first introduced in his short story, "Sailing to Danzig."¹¹ "Adam, Peter: ground, rock. Adam realized his names were basically the same, one merely a stubborn form of the other."¹² This story is revisited in the second chapter of *Sweeter than All the World*, but the novel opens by grounding itself in the land in the Waskahikan, the Northern Alberta location of Adam's boyhood. Here Adam hears nature speak to him in Lowgerman (spelled as one word), the language of his mother.

In summer the poplar leaves clicked and flickered at him, in winter the stiff spruce rustled with voices. The boy, barefoot in the heat or trussed up like a lumpy package against the fierce silver cold, went alone into the bush, where everything spoke

⁶ Rudy Wiebe, "The Skull in the Swamp," in *River of Stone: Fictions and Memories*, 249-73.

⁷ Rudy Wiebe, *The Blue Mountains of China* (Toronto: McClelland & Stewart, 1970).

⁸ *Paraguay Primeval* compact disk (LORAC Productions LOR-026 [2012]). Music by Carol Ann Weaver, texts by Rudy Wiebe (*Blue Mountains of China*), Dora Dueck (*Under the Still Standing Sun*), and writers from *Schoenbrunn Chronicles*, translated by Henry and Esther Regehr.

⁹ Rudy Wiebe, *A Discovery of Strangers* (Toronto: Alfred A. Knopf Canada, 1994).

¹⁰ *North of Centre*, a composition for reader, flute, mbira, percussion. Music by Carol Ann Weaver, text by Rudy Wiebe (from *A Discovery of Strangers*). This work was premiered in 1999.

¹¹ Rudy Wiebe, "Sailing to Danzig," in *River of Stone: Fictions and Memories*, 249-73.

¹² Rudy Wiebe, *Sweeter Than All the World* (Toronto: Vintage Canada, 2002), 10.

to him: warm rocks, the flit of quick, small animals, a dart of birds, tree trunks, the great fires burning across the sky at night, summer fallow, the creek and squeaky snow. Everything spoke as he breathed and became aware of it, its language clear as the water of his memory when he lay against the logs of the house at night listening to the spring mosquitoes find him under his blanket, though he had his eyes shut and only one ear uncovered.

Everything spoke, and it spoke in Lowgerman. Like his mother. She would call him long into the summer evening when it seemed the sun burned all night down into the north, call high and falling slow as if she were already weeping: "Oo-oo-oo-oo-oo. . . ." ¹³

Note the art of sound in Wiebe's writing: the fricatives—click, flickered, stiff, flit, quick—create a sense of darting movement, reinforced by active verbs. Note also the use of the list in the second sentence, enumerating examples of "everything" in specific detail; the use of anaphora (deliberate repetition)—everything spoke, everything spoke . . . she would call him . . . call high and falling slow—and the use of parallelism: in summer . . . in winter, barefoot in the heat . . . trussed up like a lumpy package These are just a few of the devices that draw the reader into an attentive presence in the scene, much as music does. And there is music, first the mother's wordless tone, and the boy's silence in response. She hugs him hard against her apron as she scolds him for not answering. Wiebe uses the art of words to evoke the wordless bond between them.

The sounds of nature blend into song through Adam's mother's voice as she sings hymns in "Sailing to Danzig." First produced as a Canadian Broadcasting Corporation (CBC) radio drama in 1986, "Sailing to Danzig" highlights the third dimension that sound plays in Wiebe's story.¹⁴ Song is a means of preserving memory that transcends narrative or historical detail: at

¹³ Ibid., 1.

¹⁴ The first version of "Sailing to Danzig" was a half-hour radio drama, commissioned by and broadcast on the CBC *Arts National* program on July 20, 1986 for four voice actors, with music composed by Carol Dyck and performed by Carol Dyck and Rudy Wiebe. The short story was subsequently published in *Malahat Review* 76 (September 1986): 64-73.

the end of the story, the narrator remembers his parents “at our kitchen table in Alberta suspending the thin thread of their songs across the marshes and bitter rivers of their memories.”¹⁵ In this metaphor, nature and music merge to describe the geography of thought.

The insistence on the part of some environmentalists that nature writing be purely mimetic—serving as a transparent medium to reveal the nonhuman world—is an oversimplified understanding of language that assumes humans are detached from nature and can observe it, even as we attempt to faithfully represent its “otherness.” What descriptions—or good ones, anyway—actually reveal is consciousness, the quality of a mind playing over the world of matter, says poet Mark Doty. Description is a mode of thinking, but “[i]t’s incomplete to say that description describes consciousness; it’s more like a balance between terms, saying what *you* see, and saying what you *see*. . . . It’s as if the harder the eyes and verbal faculties work to render the look of things, the more we see that gaze itself, the more we hear that distinctive voice.”¹⁶ What do we add of ourselves to our portrait of the natural world when we write it? How can we allow nature to inscribe itself in us?

This theme is addressed in one of Wiebe’s most famous short stories, “Where is the Voice Coming From?” It begins: “The problem is to make the story.”¹⁷ The fact-seeking, rational narrator thus proceeds in his attempt to piece together the “truth” that a Cree man called Almighty Voice, “who allegedly killed a number of Canadian police officers, was himself killed.” The deaths are clear, although the exact nature of the killings and the location of burial sites are less so. As the narrator pursues the “evidence,” he is forced to question the nature of fact and evidence. Finally, the voice of truth he seeks appears to arise from the ground itself, as if, when narrative and facts lose their explanatory power, the earth cries out as witness. At the end of the story the narrator recognizes his status as interpreter, and the limitations of his ability to understand: “I say ‘wordless cry’ because that is the way it sounds to me. I could be more accurate if I had a reliable interpreter who would

¹⁵ Rudy Wiebe, “Sailing to Danzig,” in *River of Stone: Fictions and Memories*, 272.

¹⁶ Mark Doty, *The Art of Description: World into Word* (Minneapolis: Graywolf, 2010), 45.

¹⁷ Rudy Wiebe, “Where is the Voice Coming From?” *Collected Stories: 1955-2010* (Edmonton, AB: Univ. of Alberta Press, 2010), 22-31.

make a reliable interpretation. For I do not, of course, understand the Cree myself.”¹⁸ This recognition of his partial, limited ability to interpret what he hears casts the narrator as a member of an interpretive community rather than as an authority. In fact it is only when we acknowledge the limitations of our vision that we grant subjectivity to the other, whether that other is a person or the land.

“Where is the Voice Coming From” begins with the narrator quoting Teilhard de Chardin: “We are continually inclined to isolate ourselves from the things and events which surround us . . . as though we are spectators, not elements, in what goes on”; and Arnold Toynbee: “For all that we know, Reality is the undifferentiated unity of the mystical experience.”¹⁹ The narrator hastily dismisses this possibility, stating that the historical encounter he investigates belongs to the world of chronology. It is past, over, recorded, complete. But as he encounters ambiguity after ambiguity and irreconcilable contradictions in his evidence, he recognizes that this is a part of the reality he narrates. By retelling the story and recognizing the limits of his understanding the narrator recognizes, at least for a moment, what Toynbee calls “the undifferentiated unity of the mystical experience.”

Teilhard de Chardin’s suggestion that we are a part of nature, not apart from it, resonates with current ecocritical debate. In his introduction to *Ecopoetics: The Language of Nature, the Nature of Language*, Scott Knickerbocker writes: “[B]ehind the ecocritical discomfort with language and aesthetics lies the fundamental question that drives almost every philosophical inquiry of environmentalism: Are humans (and their constructions, including language) a part of nature, or are humans and nature distinct categories?”²⁰ “The answer must be both,” Knickerbocker argues, contending that “humans are distinct, yet inseparable from the rest of nature.”²¹ According to literary critic Kenneth Burke, humans are the symbol-making animal, but rather than a sign of our superiority, this distinct capacity is part of our nature and thus part of nature as a whole. According

¹⁸ Ibid, 31.

¹⁹ Ibid, 22.

²⁰ Scott Knickerbocker, *Ecopoetics: The Language of Nature, the Nature of Language* (Amherst, MA: Univ. of Massachusetts Press, 2012), 4.

²¹ Ibid.

to poet and environmentalist Gary Snyder, “Language and culture arise from our biological-social natural existence, animals that we were/are. Language is a mind-body system that co-evolved with our nerves and needs.” And, as the narrator’s continually frustrated search for the true story in “Where is the Voice Coming From” shows, “It is of a complexity that eludes our rational intellectual capacities.”²²

Knickerbocker coins the term “sensuous poesis” to refer to the language usage of writers, specifically poets, whose approach to representing nature is not so much a version of realism as it is “the process of rematerializing language specifically as a response to nonhuman nature.”²³ Like the poets Knickerbocker analyzes—Wallace Stevens, Elizabeth Bishop, Richard Wilbur, and Sylvia Plath—Rudy Wiebe “operates from the assumption that humans (and their tools, including language) are both distinct and inseparable from the rest of nature.”²⁴

As the poststructuralist Charles Bernstein says, “Alphabetic aurality is not cut off from the earth but is a material embodiment of it.” That is, the sounds of words arise from the sounds of the natural world. Furthermore, he notes:

Sound is language’s flesh, its opacity as meaning marks its material embeddedness in the world of things. . . . In sounding language we ground ourselves as sentient, material beings, obtruding into the world with the same obdurate thingness as rocks or soil or flesh. We sing the body of language, relishing the vowels and consonants in every possible sequence.²⁵

Through his attention to the sounds of words, Rudy Wiebe has given them flesh. In “Seven Words of Silence,” an address he gave at a Mennonite/s Writing conference at Eastern Mennonite University in 2012 and later published in *The Conrad Grebel Review*, Wiebe notes:

The first word of silence is SOUND. In the Canadian parkland where I was born, the silence of living things surrounded me.

²² Ibid, 2.

²³ Ibid.

²⁴ Ibid.

²⁵ As quoted by Knickerbocker in *Ecopoetics*, 7.

On our pioneer farm we had no electricity or gasoline to make motors roar; horses and cows snuffled in barns, pigs in pens, chickens. I was the youngest child by four years and grew up largely alone. The winter snow falling, spruce branches in wind, mosquitoes after a rain or birds just before sunrise, coyotes at night; on a hot summer afternoon cowbells, or thunder; somewhere a dog barking. In autumn, if I was very attentive, a poplar leaf falling to the ground. These were the sounds of my growing up. These slight sounds were not dominating in any sense; rather, they defined the earth's fundamental silence in the same way that lines on a page, or the road-allowance grid of the land survey, sketch the unfathomable nature of paper or land. These tiny, living sounds, any one of which I can recall in an instant no matter in what cacophonous surroundings I may find myself anywhere on earth, these indelible sounds were and are for me the affirmation of the fundamental silence of the universe. . . .²⁶

The seventh word of silence is WRITING. The mystery of writing is that writing is words gathered together in silence. Writers know this perfectly well, it needs no discussion: we all want to write so well that, when the reader sees what we have written, our mutual silences will open into listening, and by *seeing* we will begin to *hear* what we have never been able to imagine before.²⁷

In this description of silence, Wiebe opens up a meeting space for the natural world, the writer's mind, and the reader's eye. In the sound of silence, the world and the text are one.

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²⁶ Rudy Wiebe, "Seven Words of Silence." *The Conrad Grebel Review* 31, no. 2 (Spring 2013): 148-49.

²⁷ *Ibid.*, 154-55.

Exploring the Changing Soundscapes of Waterloo County

Virgil Martin

Introduction

When the idea of exploring the history of our local soundscape was first suggested to me, I was both intrigued and overwhelmed by the prospect. Although I have been exploring the visual dynamics of landscapes for a number of decades, that work is made possible—almost easy—by an abundance of resources: archives of old photos, museum collections, family photo albums, local history books, postcards, paintings, etc.¹ But there are no wax cylinders or scratchy 78s that could be used to explore the former state of our local sonic landscape, or how it may be changing over time. Further, the literature and academic underpinnings for this proposed investigation are practically nonexistent.

Recognizing that the primary resources for conducting such an investigation are severely limited, we have little choice but to turn to the invocations of the written page and extant images. In a word, we need to apply our powers of imagination. On the basis of that simple premise, perhaps we can catch a whisper of the soundscape that might have greeted us if we were able to step back in time.

Fortunately, I was well primed for this ‘before-and-after soundscapes’ idea, as I happened to have been reading Bernie Krause’s wonderful book, *The Great Animal Orchestra*.² Krause’s profound insight—that healthy ecosystems manifest themselves as highly structured soundscapes—had already begun to sink in. He also makes the point that we modern, educated, and urban humans are not really equipped to appreciate those soundscapes. We have never really learned to listen to natural ecosystems, and our attempts at it are mostly limited to identifying specific sounds. It is as though we would

¹ Virgil Martin, *Changing Landscapes of Southern Ontario* (Erin, ON: Boston Mills Press, 1988).

² Bernie L. Krause, *The Great Animal Orchestra: Finding the Origins of Music in the World’s Wild Places* (New York: Little, Brown and Company, 2012).

congratulate ourselves on being able to pick out the flute and the timpani in a Beethoven symphony, content that we were truly appreciating the music! So, it would seem we are severely hobbled even in our understanding of what reaches our ears today, from what remains of the natural world. That makes the challenge of ‘recreating’ the natural soundscape of bygone eras even more daunting.

On the domestic front, perhaps we can have an easier time of it. We are much more in tune, after all, with the humdrum of our daily lives, and surely many of the sounds of human activity would be relatively unchanged and therefore convenient reference points to guide our explorations. Both indoors and out, I am fairly certain that, were we able to travel back in time, we would be struck by the hubbub, the busyness, and the general intensity of activity. Yes, there would be the clatter of pots and pans, the rattle of dishes being done, bare feet thumping across kitchen floorboards, the ‘ca-chunk’ of firewood being split, and the pleasant whirr of the spinning wheel. But with half-a-dozen, maybe more, children around the house and in the yard? Well, you get the picture. Add to that a great ruckus of cattle, sheep, pigs, chickens and roosters, horses, and of course the farm dog, and I’m guessing the truly quiet moments were almost as scarce and fleeting as they are today.

The sounds of human enterprise—whether from a farm, a mill, or any other industry—are likely to be music to the ears of those who profit from it. Neighbors may not hear this as ‘music’—unless, of course, they too have a stake in it. To everyone else, it’s just noise. But of course there is no such thing as ‘just noise’. It is by definition unwanted and even irritating, and thus it matters! It would be a mistake, however, to think that noise is a new phenomenon; it’s been with us, and no doubt complained about, at least since the time of Noah’s Ark.

What follows is a fictional time-traveler’s account, somewhat autobiographically infused, of what one might have heard in what is now the Region of Waterloo, Ontario, at fifty-year intervals over the past 200 years.

1814

It is the dead of winter, snowy and cold. I’m standing alone at the edge of a tiny clearing, all stubbly with fresh stumps. There are some brush piles and various scattered logs, and beyond that: trees and more trees. But there is

not the slightest sound. In summer, at least there would be the hum of the relentless mosquito cloud to break the silence of the long night. But now, complete nothingness. Just darkness and utter silence, stretching upward to the stars and countless miles into the forest in every direction. Minutes pass (or perhaps it's hours—there's nothing here to mark the passage of time) and the soundscape remains blank. Pure, undefiled, crystalline silence. Pure, utterly boring, desolate silence. I slowly become aware of my heartbeat, and the pulsing, rushing swish of blood in my veins, and the faint whisper of air in my nostrils. And that ringing in my ears. . . . Why haven't I noticed that before? It's really annoying! Is there even such a thing as silence? Or is it just a fleeting, maddening illusion?

I shuffle my feet to break the spell, and I realize that my toes are getting numb. It's enough to dispel the oppressive void for the moment at least, and I stand listening again, not to the silence but for sounds—any sound—that might be out there, somewhere. Perhaps, if I listen hard enough, I might even be able to hear the muffled thud of cannon fire from the Niagara frontier. But, of course, I have no realistic expectation of it. Then, without warning or fanfare, there is a sudden, sharp crack—an instantaneous, wooden pulse of sound that reverberates through the woods. The temperature has been dropping, and the fibers of some large maple nearby have been torn apart by the immense pressure of a million tiny ice crystals. And then before the echo has faded, another tree answers from deeper in the woods. Sounds! Wonderful sounds! Not what I expected, but I am grateful nevertheless, and relieved to find I'm still in the land of the living.

It's time to seek the shelter of my tiny and crude but inviting one-room log cabin. I'll stoke the fire one more time before curling up in front of it, and I'll soon fall asleep listening to its reassuring crackle. Tomorrow, just as it did today, this little clearing will come alive with the slow, steady rhythm of a razor-sharp axe as it bites into the frozen trunk of yet another big old maple.

1864

Well, my little clearing didn't really amount to very much. It was ahead of its time, I suppose. The truth is, I couldn't take the isolation, and eventually I just gave up. The acre or so that I did manage to clear was soon overgrown with saplings. It was another twenty-five years, and another generation, before

anyone again attempted to clear this land. But once that work began, every year or two another field was added to the farm. Eventually this clearing was joined up with others, to become a more-or-less contiguous open space. Yes, it's taken a generation of hardship and toil, but it has brought about a wonderful transformation of the landscape. Now that about eighty per cent of the forest in these parts has been cut down, we can see far around this Garden of Eden, in every direction. What bush is left is mostly in the swampy areas and toward the back of the farm. There, we can get all the firewood and lumber we need, and every spring we tap for maple syrup. And it's a good place for the cattle to graze when the pasture dries up. Beyond that, it's mostly out-of-mind for most of us.

I still enjoy going to the bush, especially in early summer, to hear the Wood Thrush, Pewee, Red-eyed Vireo, Great-crested Flycatcher, Winter Wren, and many others. They continue to live there, much reduced in numbers, but not in the exuberance of their songs. Some, like the various kinds of woodpeckers, the Timberdoodle, partridge, and Passenger Pigeon don't sing, making their presence known by drumming or by sounds created with their wings. But nowadays the songs of forest birds have largely been replaced by those of birds of the field. Bobolinks do their amazing flights over every meadow. Savannah Sparrows and meadowlarks belt out their songs from convenient perches afforded by the ubiquitous cedar rail fences.

Around our farm buildings, we have American Robins, several species of swallows, Sparrow Hawks, Blue Jays, Chipping and Song Sparrows, kingbirds and phoebes, bluebirds, Disselfincks, orioles, and several species of blackbirds—the list seems endless. All these have adapted and benefited from the clearing of the land. Some of them probably were not even found in these parts until after the forest was cleared, and the rest are far more common now than they would have been a hundred years ago.

Thinking about all the changes I've witnessed over these fifty years, one thing I do miss is the sound of the axe. The frontier has moved several townships to the north and west. But the fact is, even there the axe has been pretty well replaced by the more efficient crosscut saw, so chopping isn't the common sound it once was. Anyway, the sounds of land clearing may have changed, but the result is much the same. What follows close behind are the sounds of domestication: cattle, sheep, pigs, chickens—and children . . .

lots of children! Out beyond the new clearings, cowbells, half-metallic, half-leather, provide a marker for the herd's whereabouts as they forage through their pasture and bush domain beyond the fences. Fences in frontier times were built to keep cattle out of fields; now that has all changed in these parts. All the fields and pastures are well fenced, to keep the critters in, and so cowbells are seldom heard anymore.

There are plenty of new sounds, though. In recent years, mechanization has started to make itself heard. The clatter of the horse-drawn hay rake is music to my ears. This new way of making hay means I sweat a lot less, and I have more time to daydream. Like here, where I've stopped to rest the horses at the far end of the field. Just now I can hear the whistle of the mid-day steam train pulling into Berlin,³ a couple of miles to the south. The horses toss their heads and pivot their ears in the direction of the sound, as though sensing trouble. Sometimes, when the wind is just right, I can even smell it, and I suppose they can too . . . but that would be another story, I guess.

A few hundred years ago, when Aboriginal peoples had fields of corn, beans and squash in these parts, there would have been no bleating beasts or clucking chickens—just occasional human voices against an ever-changing melody of bird songs, squirrels, and chipmunks providing percussion and frogs, toads, and insects a steady drone, creating a differently and more richly orchestrated natural-world symphony than any we would hear today. Beyond these fields, hunters would have been tuned to every rustle and chirp for potential clues. What have those distant crows found? Why have the wood frogs suddenly stopped calling from that pond?

The dinner bell snaps me out of my daydream. Lunchtime already! You know, that big cast iron bell was the crowning touch on our new farmhouse, and the sweet sound of it is enough to make my mouth water.

1914

What is it about the fourteens, I wonder? War has broken out in Europe yet again; but here on our farm, those troubles seem very far away. Yes, farming is good here. It doesn't really seem that so much has changed in the past fifty years, yet I sense that much is about to change. For several decades now, a few of our neighbors have owned steam traction engines. These impressive

³ Present-day Kitchener was known as Berlin until 1916.

beasts, as big as they are, scarcely make more noise than a horse—gentle huffing and puffing, and sometimes hissing and spitting, and occasionally a blast from the shrill whistle. But now there is a new creature appearing in the fields, stinkier and noisier than the steamers. Seeing what is taking place on our roads, I suppose it is just a matter of time until even the steamers will get replaced, just as many workhorses have already been. I just read in the newspaper the other day about how Henry Ford is using an “assembly line” to build his Model T automobiles, so I guess we’ll be seeing—and hearing—a lot more of them soon. Well, there goes one now . . . and another one! More every day, it seems.

Now there are some among us—quite a few, really—who are not so sure that all this modernization is such a good idea. In fact, it has caused quite a rift in the church, and many in these parts have gone their separate way. They say the old ways are plenty good enough, and we are losing too much of those ways when we adopt every new-fangled invention that comes along. They say that the noise of the engines drowns out the songs of the birds, and when everything goes by so fast we lose touch with the land, and with our Maker. For myself, I can see their point all right, but I just don’t know if it’s possible to stop the clock or the ‘advance’ of civilization. Only time will tell, I suppose, who has made the better choice.

1964

As I stand looking across these fields, with the sun going down behind the hills to the west, I could pretend—almost believe—that nothing much has changed in the past 125 years. The fields are as green as ever. There is a Vesper Sparrow singing nearby, and a meadowlark makes one last flight over his grassy domain to announce his claim to it. Crickets chirp tirelessly, and a dragonfly whirs past my head. It’s timeless, and peaceful. Well, almost peaceful. There is also the growl and clatter of a D9 Cat working overtime to move a pile of earth, behind me and just over the hill. If I were to turn around, I would see the sun glinting off the windows of some of the many new buildings that have sprung up just in the past few years. And with plans for many more . . . I’ve been told it won’t be long. . . . I don’t want to look.

You see, I’ve been living here in one of the old farmhouses that is about to be demolished to make way for the rapidly expanding University

of Waterloo campus. It was just a temporary arrangement. I knew that. But I did not anticipate the burden of all this history, the many things that I have inherited from the land, from this place, and that I'm powerless to preserve. The sounds of this meadow are already being drowned out and soon will be completely erased. Change is inevitable, necessary, and sometimes good, I suppose, but at what cost?

But why am I nostalgic for this landscape? It, after all, was the result of a massive change, every bit as momentous and devastating as this one. Majestic forests, thousands of years old, were wantonly destroyed—to make way for something new, something better. And it lasted all of 125 years? Who remembers the sounds of that forest? And who will remember the birds in these fields?

2014

It is the coldest, snowiest winter in many decades. I'm standing near a tiny remnant of woodland on the North Campus of the University. There is no real night-time here—everything is half illuminated in the perpetual yellowish twilight of the streetlights all around, and kept half-awake by the sound of traffic slogging through slushy streets. There is no darkness and no silence.

When the racket from a small herd of snowmobiles that has invaded the city is finally muffled behind a hill, I am surprised to hear excited yelping and yapping from somewhere down by Laurel Creek. A family of red foxes! Not something I recall having heard before, here in the city. It's a rollicking, boisterous outburst that gives every impression of being full of meaning and emotion. I so wish I understood what they were saying, and could join their party.

All too soon they fall silent, and it is then I realize that there are still more snow machines in the distance. They produce an irritating, high-pitched mechanical whine; but as I listen, it dawns on me that even this despicable noise pollution is loaded with information. And with a little effort I can decode it. The rise and fall of the volume and pitch, the contours of the sound, are drawn directly from the contours of the land. Every little hill, every bend in the trail, every creek crossing is being traced out in the sounds that reach my ear. There is an unexpected satisfaction that comes with this insight, although it does not translate into a desire to join them.

So, I am inclined to conclude that soundscapes are a highly subjective thing, as much as visual landscapes, or perhaps even more so. Standing here in this one place for two centuries, if I've learned anything at all from this little experiment, it is simply that I'm not, and can never expect to be, a detached, objective listener. Rather, I am inextricably a product of my time, my culture, and my values.⁴

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*Stooking – Old Order Mennonite Women. Waterloo County, Ontario, 1970.
Photo credit: Virgil Martin*

⁴ Further sources for this work include: Michael D. Cadman, P. F. J. Eagles, and F. Helleiner, *Atlas of the Breeding Birds of Ontario* (Waterloo, ON: Univ. of Waterloo Press, 1987, www.birdsontario.org/atlas/atlasbook.jsp; Michael D. Cadman, D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier, eds., *Atlas of the Breeding Birds of Ontario: 2001 – 2005* (Toronto: Bird Studies Canada; Environment Canada; Ontario Field Ornithologists; Ontario Ministry of Natural Resources; Ontario Nature, 2007), www.birdsontario.org/atlas/index.jsp?lang=en; and Virgil Martin, *The Early History of Jakobstettel* (St. Jacobs, ON: V. E. Martin, 1987).

Six Mennonite Stories; or, the Plough and the Poet; or, What the Skunk Said

John Weier

A Skunk, and the Narrator's Childhood in Niagara

I remember, when I was four years old, a striped skunk that burrowed under the back of the barn on our farm in rural Niagara in southern Ontario. Striped skunks keep as many as a dozen burrows, and whenever they end the night's foraging, they sleep in the nearest burrow. Somehow one of those skunk dens landed in our farming backyard. My sister Kathy stepped out one spring morning to gather eggs for breakfast, and discovered a skunk caught in the wire of our chicken fence.

This business of imagination and writing—I don't know why the skunk shows up. Someone asks for a paper; and after two hours' muddle, there's a flash at the edge of my vision and a skunk steps forward. It's a lightning rod effect—I'll talk about the skunk. Though it makes no sense—I don't know what the skunk can tell me about Mennonites, or how the story will sound stretched for twenty minutes, in pitch or meter. It's a place to begin.

My family owned a fruit farm. Seven acres. Peaches, cherries, plums. Which we sold to the fruit market and canning factory. One row of Concord grapes, and a plot of vegetables. The barn of weathered board. Tall, with a gable roof. Green diamond shingles. Three lightning rods along the roof's peak. We kept a Jersey cow in that barn. For milk, cream, butter. We kept two sows and a boar. Piglets. I didn't think about where they came from suddenly. The piglets. Birth was a common event. So was death. Sometimes the sow rolled over in her sleep and we found her young dead in the morning. We kept a fattened calf and slaughtered it in fall. Father stuck it with a knife and hung it under the willow tree so the blood could drain. We kept a bay horse. Molly. Clydesdale cross. In those days we still farmed with horses.

We threw the manure from our livestock through a hatch in the wall of the barn onto a pile. Threw table scraps as well. The youngest of many, I mostly got the job. I see your nose twitch when I say the word "manure."

Manure didn't smell as bad then as it does today. We hitched Molly to the stoneboat, loaded the manure, and spread it with our pitchforks in the orchard in fall.

When we bought that farm in 1950, I hadn't learned yet how to talk, and I don't remember anything about the purchase. Don't remember the questions my father and mother asked. Should we this? Should we that? Or how much we paid. Father had been a blacksmith on the prairies. He and Mom watched their savings shrivel as farmers bought factory equipment. We borrowed money for the farm. Some from the bank, some from aunts and uncles.

Wild Brush, and the Knowledge of Good and Evil

I don't remember what the farm looked like when we arrived, the house or barn. Though everyone agrees it was a terrible mess. When we bought that farm in 1950, there was still bush on the property. My father told me as a child that in the first two years he'd cleared the last wild brush off the back of our seven acres. Those few years and acres to separate me from the wild frontier. Mennonites and the environment. We're all thinking about the environment these days—is there enough environment left to save any of us at all.

That acre of remembered brush clattered in my imagination. I imagined foxes and white-tailed deer. Imagined wild turkeys wandering in from the story of the Mayflower. I didn't imagine skunks. Imagined oak, hickory, dogwood. Birch trees and drums. Imagined Huron, Iroquois roaming our orchard. I didn't have a fruit-farming bone in my body. In those early years I already experienced doubt about the benefits of fence, car, civilization. I wanted something wilder, untamed.

My father cleared the last wild brush. He had a debt to pay, children to feed. Rasp of a bucksaw. Blow of an axe. Rattling chain. Pull, Molly! Whoa, Molly! Eight hundred kilograms [1760 pounds] of horse heaving and farting. A gathering of live trees, he cut, and chopped, and Molly dragged them into a heap of drying tinder. And then the bonfire, leaves and branches crackling in the breeze. Fire song. A wretched kind of music. The bush was gone, and in its place we planted cherry trees.

Questions about Leg-Hold Traps, about the Bible

I notice how one image of skunk and chicken wire bumps a series of other images. The way dominoes fall in a row. I remember cow, barn, and their stories. Remember a patch of wild brush. Remember Molly, the feel of her skin. This collection of stories. But not quite stories either. They're splinters of story. I notice that memory comes in fragments. With only a few details attached. And thinking about the skunk, I see how little I do remember. Who really discovered the skunk? Was it Kathy? Had she gone to collect the morning's eggs? Who called the Humane Society?

Susan, my sister, when I phone her, tells how she braided the cow's twitching tail while Jake pulled rich Jersey milk into the pail. She doesn't remember the skunk. But Jake and Kathy do. New skunk images begin to emerge. The image of the leg-hold trap, for instance. That skunk caught in our fence because of a leg-hold trap clamped to her hind leg. I wonder now where the trap came from. How many kilometers had the skunk dragged it before appearing in our lives that morning? Had she dragged it from the neighbors? From the creek nearby? Or hauled it from another of her burrows? And suddenly, I wonder whether Father planted the trap near the manure pile behind our barn. Jake is quick to defend. He says, no, no!

We construct our lives from memories. And, much as we enjoy the cascade of images, talking to siblings about family history often causes trouble. Sometimes memory leads us where we'd rather not go. We notice how our stories have become misshapen. We remember the Bible and our God-given right to dominion. But we forget to ask about the rights of skunks. I don't think anyone in my family raised questions of morality in this case of human versus skunk.

You might feel surprised that a Bible enters the text here. The Bible held a prominent place in my childhood. We read from it every day at breakfast. A worn brown hardback. In German. I look up the English words now to make sure. . . . "and let them have dominion over all the earth." A memory of the creation story. Order out of chaos. To subdue the earth. Is that what we did on our seven-acre farm, practice dominion?

Bird Behavior, Scatterguns, the Wonders of Science

The wild brush from the farm in Niagara may have been chopped down and burned before I had memory or language, but the birds from that brush lived

on. I was keenly aware as a boy of the lives of birds around me. I remember orioles, nests hung in maple trees, and their splash of dazzling colour. Remember goldfinch, their undulating flight and call. And robin parents. The way they built their nests above light fixtures. Remember Barn Swallows that nested along the rafters in our barn. And after we bought the tractor. On days we hitched the tandem disk, the way Ring-billed Gulls gathered to feed on the turned soil. In spring kettles of raptors passed above while Father, Jake, and I worked in the orchard. While my father and Jake worked, and I stared into the sky.

The bush was gone. And in its place we planted cherry trees. Leaned their tender trunks into the northwest wind so they'd grow up straight. By the time I was six years old, I was up on a ladder summers picking cherries. I remember, in July, the mixed hordes of birds that settled in our fruiting trees for their evening feed. Eating our livelihood. Grackles gorging on our cherries. My father borrowed a shotgun and took a few shots one day. Hoping to end the chaos. But decided that the scatter of shot did more damage than the invading birds. That's what he said, the gun ruins more cherries than they do.

The golden age of pesticides. DDT. Parathion. Developed for use in the world wars, they were released in the 1950s as agricultural pesticides. And maybe that's what chased off the birds, or killed them. Springtime we hitched the sprayer to the tractor. We filled the sprayer tank with water. We dumped in bags of chemical. Chemical dust swirling. Father and I, we drove into the orchard to spray. We came home wet from the poison mist. We lived at the cutting edge of agriculture. Tractor, sprayer, crankshaft, pistons pounding. A song of industry and progress. Poison, and machine music.

A History of the Striped Skunk, Lots of Excitement

Skunks. They live in farming areas, mixed woods, cities. They're not afraid of humans. They feed heavily in fall to build reserves for winter. Any dark place underground will do for a den. They wake to mate in February. And after sixty days the kits are born. Skunks eat both plant and animal material. Nuts, roots, mice, frogs. They scavenge carcasses. They're reluctant to use their spray; it takes a long week to replenish. There's a popular notion that skunks can't spray if you lift them off the ground by their tails. Think carefully

before you try this. Research shows that skunks can spray no matter how or where you hold them. Getting rid of the smell? Tomato juice and hydrogen peroxide work.

The skunk's greatest natural predator is the Great Horned Owl. Owls have almost no sense of smell. Motor vehicles don't count as natural predators. Skunks, with their poor vision, are particularly vulnerable to road traffic. About half of skunk deaths in North America are caused by humans. Roadkill. Shooting. Poisoning.

We humans often associate the noun "skunk" with the verb "amble." I imagine a skunk on my street in Winnipeg. It ambles down the pavement. No hurry. Ambles five meters in one direction. Four in another. Curves to my boulevard. Sticks its nose under the root of an elm. Maybe a Junebug larva down there. It ambles on. Turns left. Stops to poke at my bergenias. No one knows ambling the way the skunk does. I wonder about this skunk. What does it remember as it wanders my street. Does it remember my bergenias? Does it notice the new cranesbill? What does it think, this skunk? Does it think about history, or justice? Does it think at all as it snuffles across my yard?

But I've wandered from the story I promised. A skunk had burrowed under our barn in Niagara. I woke one morning to unusual excitement. Raised voices. Strong odor. One of my sisters had gone to gather eggs for breakfast. Kathy had stepped outside and found a skunk caught in the wire of our chicken fence. The skunk's back leg wedged in a leg-hold trap. And during the night, when it tried to crawl through the fence, the trap snagged on the wire. That poor skunk, twice trapped. I'm not sure which details registered in Kathy's memory, about the trap and wire; but the skunk did register. I heard her shout. I jumped from my bed. I clambered downstairs, and stepped outside to check. At the back of our yard, black and white, tail raised and ready, the rear end of a skunk turned in my direction. I wonder, in the moment I observed the skunk, is that when I became a writer?

We stood behind the house and talked about options. A family of eight and everyone had an opinion. Kathy said we should free it from the fence with wire-cutters so it could wander off to die elsewhere. Linda said we should sneak up and catch the scent in a bottle to make perfume. Britannica, she said. And I heard Susan snicker. Someone said to find a gun, but that

would surely release the scent. It wasn't a question of morality, you see; it was a question of odor. Father said to call the pest control. Could someone remove this skunk without creating a lot of skunk smell? No problem. Within an hour a pickup truck pulled onto the driveway. A man stepped out. He pulled a gun from the cab. He didn't say a word. He shot the skunk. Bang! And drove off.

Heaven and Hellfire, a Problem with Endings

I see this podium—a kind of pulpit, and chairs set in neat rows. I think of the preacher. It's not a pleasant reminder, given my church experience. Hard words. Black and white thinking. Not much grace. Preacher bumping his fist on the pulpit and chattering about unpardonable sin.

We washed the car under the willow tree on Saturday. We put on our best clothes on Sunday. And went to church. Looked like a fortress, that place. Heavy, and built of brick, with giant stairs and towers. Once inside we kept quiet. There was nothing to do, you couldn't talk, or read. Couldn't look out. Windows rippled and frosted. Blocking out sun, moon, weather. Blocking out trees, birds. Anything living. And then we sang. Grievous and mournful melodies. Even the cheerful ones we managed to weigh down. As though there was no connection between music and earth at all. The preacher stood, presented his versions of frontier. A city of precious stone. Streets of gold. One landscape. The other, a dark and cavernous hell. The gnashing of teeth. Two landscapes, and no real land in either of them.

Some question the harm done by DDT and Parathion. Others insist on the necessity of guns. We were just trying to stay alive back there in 1955, to feed ourselves and pay our bills. But most of us can now agree on the dire consequences of the history of our human action. It's not a joyful story. I can't count off the number of seconds it took for the skunk smell to reach our noses. It wasn't many. Our yard smelled awful when the man arrived with his gun, but it smelled worse when he left. Our barn smelled, house smelled, clothes smelled. And when we sat down finally to read from the Bible and eat breakfast, even that smelled.

Jake, within minutes of the rifle shot, picked up a spade and walked into the orchard to dig a hole. He accepted his place in the scheme of things. He put on a pair of gloves and worked the skunk free of the wire. He carried

her into the orchard and buried her. No one sang. And yes, the skunk turned out to be a 'she'. A few days later Helen passed by the manure pile behind the barn and discovered a litter of baby skunks scrambling from a burrow under the barn. Orphaned, and hungry, baby skunks. Not only had we killed a skunk, but by the time the thing was done we'd killed the whole skunk family.

It's not a happy story told this way. But that's the record of our farming in Niagara. That's who we were, and what we did. Soon after the smell had cleared we forgot about the skunk. And maybe this is not the way to end. Maybe I should find some happier words to say. And maybe not. I can tell you this. That striped skunk came to visit me again, but I'll save that story for another time.

John Weier, a recent Writer-in-Residence at the University of Winnipeg, is also a luthier and a birder.

SECTION III

Hearing the Natural World: Patterns, Prices, Sounds

Soil, African Soil (2.3 Tablature)

John Weier

soil
african
soil red-brown
soil the way it ripples
drifts the way it spins
swirls devils
in circles yowls
whorls the way
it straddles
the wind and sand
sand sun
swept sand
its heat its fervour
its reek
of dark solitude
the hourglass way
it tickles past
his fingers
and chanting
goshawk the way
it slides
through his thirsty
hands (six
psalms to go)

John Weier, a recent Writer-in-Residence at the University of Winnipeg, is a luthier and a birder. This poem originally appeared in his collection Where Calling Birds Gather (Winnipeg: Turnstone Press, 2013) and is reprinted by permission of the publisher.

Kalahari Soundscapes: The Functional Significance of Large Carnivore Vocalizations

Gus Mills

Introduction

The 2014 Sound in the Land festival/conference sought to explore and discover new ways of hearing the earth, listening to the environment, and creating musical and scholarly responses to what we hear. This, in essence, is “ecomusicology”—the study of music, culture, and environment in all their complexities. It considers musical and sonic issues, both textual and performative, related to ecology and the natural environment.¹ This concept dovetails with another important concept, that of biodiversity. Biodiversity should not be interpreted simply as implying species richness or species diversity. It is a broad concept incorporating compositional, structural, and functional attributes at different levels in the ecosystem, namely landscapes, communities, species, and genes.²

My research in the Kalahari aims at understanding functional relationships between the environment and predators and their prey, and also relationships among the predators themselves. In this paper I discuss some of these relationships within an ecomusicology framework, using four species of large carnivores as examples: two cats and two hyenas, one each of which is more solitary and the other highly social. The cheetah *Acinonyx jubatus* is the solitary cat; the lion *Panthera leo* is the social cat. The brown hyena *Hyaena brunnea* is the more solitary hyena; the spotted hyena *Crocuta crocuta* is the social one.

The Kalahari

The Kgalagadi Transfrontier Park, located in the Kalahari regions of both Botswana and South Africa, is a pristine area of 38,000 square kilometers

¹ *The Grove Dictionary of American Music* (Oxford: Oxford Univ. Press, 2014).

² R.F. Noss, “Indicators for Monitoring Biodiversity—a Hierarchical Approach,” *Conservation Biology* 4 (1990): 353-54.

(14,670 square miles) in the southern, most arid, part of the Kalahari. The Kalahari is a large, sand-filled basin, with the sand in this region piled into linear or seif dunes fixed by vegetation. Annual rainfall in the study area is approximately 220 mm (nine inches). Two riverbeds run through the area, but they only flow for short periods and distances during abnormally wet years. There is no naturally occurring permanent water in this area, and all animal inhabitants, including the large carnivores, are adapted to survive without surface water. The vegetation is predominantly shrubby grassland, except along the riverbeds where an open tree savannah is found. Ecological conditions dictate that herbivorous animals are generally thinly distributed and need to be mobile. One of the major biodiversity characteristics of the Park is that it is a relic of a large herbivore nomadic community in an arid ecosystem, supporting a functional large carnivore predator/prey system.

Cheetah

The cheetah is a solitary cat. Females raise their cubs alone; however, about half the adult males form strong and long-lasting coalitions like those established among male lions (no other cats do this), usually of two or three members. Female cheetahs are not territorial, and infanticide is not an issue for female cheetahs to contend with.³ The call of the female to her cubs and vice versa is a soft, uncat-like sound, more like the chirp of a bird. It does, however, carry over a surprisingly long distance. It is well-suited to the function of conveying to each other their whereabouts after a separation, without drawing the attention of potential predators such as lions and spotted hyenas. Mother and cubs, and coalition males, also purr loudly when socializing and cleaning each other's faces after feeding.

When searching for a female in heat, male cheetahs may advertise their presence with a louder stutter-like, churtling call. There is risk involved in this, as the call may attract other males in the vicinity who are also searching for the female. This is likely to result in aggressive behavior. On one occasion our research team witnessed a two-male coalition attack and kill a single male which had inadvertently attracted other males in this way.

³ David W. Macdonald, Andrew J. Loveridge, and Kristin Nowell, "Dramatis Personae: An Introduction to the Wild Felids," in *Biology and Conservation of Wild Felids*, ed. David W. Macdonald and Andrew J. Loveridge (Oxford: Oxford Univ. Press, 2010), 3-58.

Lion

Of thirty-six species of wild cat in the world, the lion is the only one that is truly social. Adult females form stable groups known as prides. These groups consist of several related females and their offspring which are raised communally. They are joined by less permanent adult male members; occasionally a single one, but in the Kalahari usually coalitions of two to three, and even more in other, more fertile areas. Members of a coalition share the same status and protect females and their cubs from other infanticidal males which may invade the pride territory. Should a new coalition manage to evict the males from a pride, they will kill the cubs. The females then come into heat and mate with the new males. In this way the males ensure that the cubs they are protecting are their own, and the females have the protection of the strongest males to ensure that their cubs survive.⁴

Lions, like other big cats of the genus *Panthera*—the tiger *Panthera tigris*, jaguar *Panthera onca*, and leopard *Panthera pardus*—can roar loudly and deeply because of adaptations to their vocal cords. These are flat and square in shape, loose and gel-like, and can withstand strong stretching and shearing, as air from the lungs passes through them. The tonal frequency when roaring is a function of the mechanical properties of their vocal cords, not their size.⁵

Lions are able to identify the roars of different individuals. Males roar to proclaim their presence in an area, often in unison. Intruders' roars in a territory elicit the cooperative behavior of male coalition residents. They will respond by seeking out the intruders to defend the territory.⁶ Females can distinguish between the roars of resident father males, which they ignore, and unknown potentially infanticidal males, which cause them to retreat rapidly with their cubs.⁷ Females also roar to proclaim territory which they

⁴ Ibid.

⁵ Sarah A. Klemuk, Tobias Riede, Edward J. Walsh, and Ingo R. Titze, "Adapted to Roar: Functional Morphology of Lion and Tiger Vocal Folds," *PLoS ONE* 6(2011): e27029. (*PLoS ONE is an international, peer-reviewed online publication that presents primary research from all scientific disciplines.* – Editor)

⁶ Jon Grinnel, Craig Packer, and Anne E. Pusey, "Cooperation in Male Lions: Kinship, Reciprocity or Mutualism?" *Animal Behaviour* 49 (1995): 95-105.

⁷ Karen McComb, Anne Pusey, Craig Packer, and Jon Grinnel, "Female Lions can Identify Potentially Infanticidal Males from Their Roars," *Proceedings of the Royal Society, London B*

defend against females from neighboring prides. Unlike the males, which are basically defending the females and their cubs, the females defend the food resources in the territory. They are able to assess the numerical strength of an intruding female group and, presumably, the extent of the threat. They modify their behavior depending on the numbers in the trespassing group. They respond more quickly to the roar of a single female than to the roars of several females. They tend to be more cautious and may also call in other lions from the pride when confronted by groups of unfamiliar females.⁸

Brown Hyena

The brown hyena is well adapted to arid regions.⁹ It is predominantly a scavenger, supplementing its diet on wild fruits. It is blatantly solitary in its quest for food, always moving on its own, but secretly social in that it is a cooperative breeder. Several, mainly closely related, individuals share a common territory of about 300 square kilometers (116 square miles) and help to feed the cubs by carrying food to the den.¹⁰

The vocal repertoire of the brown hyena is limited to a series of predominantly short-distance communications, for example a whine by cubs begging for food from adults, and a hoot-laugh, signifying dominance in occasional dyadic interactions—usually between clan members—at food. The loudest sounds made are a combined yell and growl. This is heard during rare, one-on-one, ritualized territorial disputes involving neck-biting, and is made by the submissive animal.¹¹ To make up for this small vocal repertoire, the brown hyena has evolved an elaborate scent-marking strategy known as pasting—the secretion of complex chemical compounds onto grass stalks through anal glands. When moving through the territory, a brown hyena pastes an average of 2.65 times per kilometer (4.2 times per mile), resulting in an elaborate network of chemical messages left to others of its species.¹²

252 (1993): 59-64.

⁸ Karen McComb, Craig Packer, and Anne Pusey, "Roaring and Numerical Assessment in Contests between Groups of Female Lions," *Animal Behaviour* 47 (1994): 379-87.

⁹ Michael G.L. Mills, *Kalahari Hyenas* (London: Unwin Hyman, 1990), 2.

¹⁰ *Ibid.*, 231-34.

¹¹ *Ibid.*, 167-70.

¹² *Ibid.*, 191.

Spotted Hyena

Although the spotted hyena, like the brown hyena, is well adapted to scavenging, it is also an efficient predator. In the Kalahari, 73 percent of the spotted hyena's food comes from its own kills.¹³ Most food items provide a meal for several hyenas at one time, and for this reason spotted hyenas often forage in groups. Spotted hyenas live in larger clans than do brown hyenas. In the Kalahari, because of the scarcity of resources, clan size is comparatively small (usually 5-12) and clan territory size is large, with a mean of 1,095 square kilometers (462 square miles).¹⁴ In more productive areas, such as the Ngorongoro Crater in Tanzania, as many as 80 spotted hyenas may live in a territory as small as 40 square kilometers (17 square miles).¹⁵

The spotted hyena has probably the most complex social system of any mammalian carnivore. A clan revolves around its adult females. They are socially dominant to the males and take the lead in most clan activities. Clans are arranged in a linear hierarchy in which the status of the lowest ranking female is above that of the highest ranking male. Co-operation in raising cubs does not occur; females suckle only their own cubs, and clan members do not carry food to another female's den. For the first year of its life, a cub's main source of food is its mother's milk. For this reason, female dominance is important; it assures them priority of access at carcasses, and enables them to feed quickly, convert the meat into milk, and return to the den to feed their cubs.¹⁶

Spotted hyenas live in fission/fusion societies, where members change group composition and size often and rapidly, depending on circumstances. They may be found alone when out scavenging, in a hunting group of several, or in a group of a dozen or more to defend the territory against an incursion from a neighboring clan or an interspecific clash with lions, their major competitors.¹⁷

In order to accommodate this complex social system, the spotted

¹³ Ibid., 35.

¹⁴ Ibid., 165.

¹⁵ Hans Kruuk, *The Spotted Hyena* (Chicago: Univ. of Chicago Press, 1972).

¹⁶ Marion L. East and Heribert Hofer, "Crocota crocuta Spotted Hyaena," in *Mammals of Africa* Vol. 5, ed. Jonathan Kingdon and Michael Hoffmann (London: Bloomsbury, 2013), 273-81.

¹⁷ Ibid.

hyena has evolved a number of communal and long distance vocalizations.¹⁸ One of the best known is the whoop. Two structurally distinct types of whoop are made: 1) asymmetrical, which produce a lowing sound that ends abruptly with an increase in pitch, and 2) symmetrical, which also start with a lowing sound that rises in pitch but then returns to the initial lowing sound. Each whooping bout contains about nine individual whoops. There is considerable variation between individuals in the structure and number of harmonics in the whoop, and experiments have shown that hyenas, like lions, can recognize callers individually, since the structure and harmonics of the whoop of the same individual remain constant over several years.¹⁹

Two main functions of whoops are recognized. The first is a display of identity. This is particularly important for males. Because of the polygamous mating system and dominance hierarchy among males, whooping serves to advertise status. Dominant males exert more effort than low-ranking males when whooping. They have higher display rates, more often use the energetically costly symmetrical whoop, and produce more calls per bout. This may serve as an honest signal to the females of a male's evolutionary fitness.²⁰ In effect, the males are saying to the females: "Look how much energy I can spend on advertising myself. I have good genes and so you should choose me as a mate."

The second major function of the whoop is as a rallying call, and is more often used by females. Females whoop collectively in agonistic territorial encounters between clans or when interacting with lions. This whoop is repeated more rapidly than an advertising whoop. It is a call to arms, as hyenas quickly arrive on the scene from different directions.²¹ As groups form, and if the interaction escalates, a number of other vocalizations are emitted, giving rise to some of the most remarkable sounds in nature—a cacophony of whoops, yells, howls, lows, and growls. These group displays

¹⁸ Mills, *Kalahari Hyaenas*, 180.

¹⁹ Marion L. East and Heribert Hofer, "Loud Calling in a Female-dominated Mammalian Society: I. Structure and Composition of Whooping Bouts of Spotted Hyaenas, *Crocuta crocuta*," *Animal Behaviour* 42 (1991): 627-49.

²⁰ Marion L. East and Heribert Hofer, "Loud Calling in a Female-dominated Mammalian Society: II. Behavioural Contexts and Functions of Whooping of Spotted Hyaenas, *Crocuta crocuta*," *Animal Behaviour* 42 (1991): 651-69.

²¹ Ibid.

are geared to be intimidating. The more individuals that partake, the louder and more varied are the sounds. This conveys the combined fighting power of the group to the opponents, and may serve to limit the intensity of the conflict. The smaller and/or less vocal, and therefore less confident, group might back down, thereby limiting outright aggression and the possibility that participants might become severely injured.

Conclusion

In this short account I have tried to place the sonic attributes of some remarkable animals into an evolutionary scientific framework as another way of listening to the earth. Whatever our approach and philosophical angle to life might be, I believe it is important to try to understand the underlying biological significance and function of animal behavior. Not only is such understanding empowering, it also enhances respect, and thereby our desire to conserve other forms of life besides our own.

Gus Mills, a biologist, has spent more than forty years studying large carnivores in South Africa's Kgalagadi (Kalahari) Transfrontier and Kruger National Parks.



*Male Cheetah calling. Kgalagadi Transfrontier Park, South Africa, February 14, 2010.
Photo credit: Gus Mills*



*Lion roaring. Kgalagadi Transfrontier Park, South Africa, July 13, 2011.
Photo credit: Gus Mills*



*Brown Hyena cubs at their den. Kgalagadi Transfrontier Park, South Africa, July 3, 2010.
Photo credit: Gus Mills*



Spotted Hyena showing a hierarchy in which females dominate. Here a female chases a male while a second female keeps the food. Kgalagadi Transfrontier Park, South Africa, March 13, 2011. Photo credit: Gus Mills

The Price of Living with Nature: Stories and Sounds

Margie Mills

Early Years in the Kalahari

I have had the very privileged adult life of living with a man passionate about all things “wild”—particularly carnivores. This life has taken me, first as a young bride of 21, into the depths of the Kalahari Desert to study the then little-known nocturnal brown hyena with South African researcher Gus Mills. This meant the slow process of searching the Kalahari dunes with the help of amazing Bushmen trackers¹ for clues of hyenas’ existence left by their tracks, and eventually locating and radio collaring several individuals. We were fascinated by the way the trackers communicated to each other in their language of symphonic clicks when deciphering the stories left in the sand. Using radio signals to find the hyenas, we patiently habituated them so that we could, by following them for nights at a time, begin to unravel how they existed in this harsh environment. This also involved long nights sitting in a vehicle at their dens, taking turns on watch in the dark and waiting for adults to appear. My method of keeping awake was to “crochet by feel,” and the next morning I would often have to undo most of the night’s handiwork.

The usually cloudless Kalahari nights present magnificent starscapes. Besides watching, which taught us how much one can actually see in the moonlight with a pair of binoculars, we listened. Since Kalahari nights are unique for their utter stillness, occasionally punctuated by the plaintive cries of black-backed jackals or the distant whooping of spotted hyenas, these sounds always elicited the comment and point of the finger by Gus: “Shhhh, listen, music!” But this quietness served to sharpen the senses so that the slightest sound—the soft scuffle of the pads of a hyena walking on the sand or a short squeal of a hyena cub—might be the cue to the arrival of an adult visitor bringing food to the den.

We soon found out that brown hyenas are great wanderers, moving up

¹ “Bushman” is the preferred name that the San people in this part of the Kalahari Desert call themselves. They are the original hunter-gatherer inhabitants of the Kalahari.

to 50 kilometers (31 miles) a night in search of food. Keeping up with them in the vehicle was challenging and exhausting, yet at the same time fascinating and rewarding, gifting us with many magical memories. No lights, no roads, no human sounds at all—only the music of nature. We often felt that we were the first humans ever to have been there.

For the first two years of marriage, our home was a tent and a ten-foot caravan [trailer] parked under the shadiest camelthorn tree we could find in the tourist camp where we were stationed. Although I tried to make it as homey as possible, we very quickly realized that living in this manner exposed us to the elements—the often above 40°C (above 100°F) summer midday heat, the below freezing winter nights, the sometimes violent dust storms (you could hear them coming) and even flooding. Our cuisine was limited primarily to tinned food, for the nearest fresh tomato was 420 kilometers (260 miles) away, a day-long expedition on dirt roads to the nearest town! We ventured into town only a few times a year.

Our anticipated two-year stay in the Kalahari ended up being twelve years; once that sand gets under your nails you are hooked. After seven years we were blessed with our first son, Michael. However, having a baby meant that I couldn't go with Gus careening over the dunes after hyenas at night, so life got quite lonely. By this time we were living in a brick house, with Gus employed as the first biologist in the Kalahari Gemsbok National Park. With a generator we now had electric lights from 6:00 PM to 10:00 PM, but the generator was noisy and not strong enough for any electrical appliances. So, besides the pristine sounds of the desert, our soundscape also included the buzz of the generator and the musical whistle of the boiling kettle on the gas cooker, which was still very much a part of our lives.

Stevie was born two years later, meaning that Michael now had a playmate. Days were fun—going for game drives, reveling in nature's wonders, and always on the lookout for tourists arriving with children who might be extra playmates. A regular highlight was a trip up to Gus's camp in the bush a few hours away. Here, we would have an early afternoon family meal once Gus had woken from his day sleep after his night's work.

The boys loved to be playing outside. I felt I always had to be with them, mainly because of my worry about their encountering the extremely dangerous yellow cobra or the venomous puff adder, common snakes in the

area. Luckily, puff adders make a “puffing” sound which would warn us of their close proximity even when we didn’t see them, allowing us to make a hasty retreat. I preferred being outside with the boys to the prospect of being faced with a crisis 160 kilometers (100 miles) away from the nearest telephone and 420 kilometers (260 miles) from the nearest doctor. It was always an anxious time for me when the children got sick, and only then did I wonder why we lived in such a remote area.

A Move to Kruger National Park

In 1984 we made a big move to the opposite side of the country, when Gus requested a transfer to the famous Kruger National Park in the eastern, much more luxuriant part of South Africa. Neither of us wanted to leave the Kalahari, but we both agreed that we did not want to send the boys away to boarding school at their tender age. Skukuza, the administrative headquarters and main camp of the Kruger where we were based, had both a nursery school and a primary school.

Life was now completely different from what we had experienced in the Kalahari, and in some ways we had the best of both worlds, surrounded by the bush but with all the modern conveniences—24-hour electricity and telephones—as well as doctors, a shop, a church, and a wonderful community of friends. The boys loved all the activities they could now participate in, and my only sadness was that I was no longer involved with Gus’s research. I began to feel out of touch with nature. It was all relative, though, because the music continued, with interesting visitors like a family of warhogs rooting in our garden and roaming the streets, lions making nightly kills in the village, elephants enjoying our garden trees during the dry season, and spotted hyenas calling almost every night.

Within a year, tragedy struck when our little Stevie died from complications of chickenpox. This experience changed us forever, reinforcing what is really important in life. As the months passed, the darkness slowly gave way to glimmers of light, and within the next year we were mightily blessed with the birth of our daughter Debbie. For the next twenty years I was involved with community matters both inside and outside Kruger Park. Gus kept me up to date on his fascinating research, and the children and I relished opportunities to go out with him to witness first-hand what he was doing.

My main project was teaching various handicrafts to a group of thirty-six Mozambican women living in a community neighboring the park. The women were refugees who had fled war in their own country, many having braved walking through the dangers of the park at night with their children in order to escape to safety. For them, the sounds of nature often denoted eminent danger rather than conveying pristine beauty or musical wonder. They told some hair-raising and horrific stories. Most of their male family members had either been killed or remained in Mozambique to fight a senseless civil war. Life was extremely tough for them, and I will never forget the utter despair emanating from their eyes when we first met.

The refugees were given a piece of land on which to reside by the local chief, and an international NGO, Operation Hunger, provided basic foodstuffs on an irregular basis. This created tensions with the local residents who were also extremely poor, often hungry, and couldn't understand why food was not offered to them as well. We started a gardening project, but water was a problem, even for drinking. One of my most time-consuming activities in the beginning of the project was to collect empty bottles and fill them with drinking water to take out to the group each week. Luckily the end result was the installation of a borehole (a small-diameter well) sponsored by a friend and a local company, which lightened the load for the whole community.

My greatest desire was to work with these women who had suffered so many hardships. Together we decided that the best approach would be for them to acquire skills that could not be taken away. First, we built a community center, then we began sewing classes, and in the end some women became expert seamstresses as well as amazing designers. After a few years we received a generous donation of new sewing machines and other equipment. The weekly classes would begin with wonderfully enthusiastic praise and worship songs, often accompanied by drumming on the metal sewing tables, stamping of feet, and clapping of hands—an uplifting experience created by their music.

We would consult together about what the participants would like to make and consider what was in demand by surrounding communities, so they could produce items that could bring them money. Additionally, the women made articles for the ecotourism industry. I learned that hardship

can unite people, as shown by the joyous sounds of the women singing while they worked—with every now and then someone jumping up and dancing—and by the laughs we had trying to understand each other (I never did master the Tsonga language). Each visit was a blessing for me and, I hope, for them too.

Working with these women allowed me to see, first-hand, how they had to struggle each day to survive. Yet these wonderful people taught me so much. When their first crop of vegetables was picked, they wanted me to take it. Each year I would buy them a length of material so they could make themselves outfits for the annual Christmas party. One year they presented me with a tattered, worn envelope filled to the brim with coins they had collected so that I could buy material to make myself a new dress—humbling, to put it mildly.

However, challenges existed on many levels. Occasionally experts talked to the sewing group about conserving nature, although preaching to them about not chopping down trees for firewood to cook food hardly made sense, given their poverty. As well, family planning was complicated because women were often pressured by their husbands to have many children. Also, having only two children seemed risky, because so many children died because of isolation and lack of medical help. A few women bravely used contraceptives, afraid that their husbands might find out. Consequently I worked with basic hygiene and first aid, often driving sick people to the hospital.

We also helped the women start up an ongoing, flourishing preschool for their children. Soon after it was started, teachers brought a six-year-old deaf child to me for help. I took her to an ear and speech specialist, only to discover her problem was a huge wax blockage that she had had since birth. As soon as her ears were cleaned out, her hearing was perfect and she could learn to talk. Unnecessarily, she had spent six years in a silent and lonely world.

In total, these experiences with the Mozambican women proved invaluable in my discovery of both the beauty and harshness of life found in parts of South Africa's natural environment. The prices these women paid to live in this landscape provided me with yet another sense of what it means to live in relation to the land. But the nuanced sounds of these women speaking

lyrical Tsonga, dancing, jumping and singing, in spite of their considerable hardships, remain some of the most memorable parts of our stay in the Kruger.

The Kalahari Revisited

Gus and I were very happy to be able to return to the Kalahari in 2006, this time to follow cheetahs. We were once more listening to the stillness and subtle blend of natural sounds within the desert—the cries of jackals, the screeching of Barn Owls, the raucous *krak-er-ak-krak-er-ak* of the displaying Black Korhaans (birds of the *Otididae* family, which includes bustards) and, at sunset and through the full moon night, the perpetual *tuk tuk tuk* of the Barking Geckos, sounding like two stones being tapped together. As enchanting, but different from the sounds we remembered from our village setting in Kruger, were the mournful call of the Green-spotted Dove, the whistle of the White-browed Robin-chat, starting softly and rising to a crescendo, and at night the always pleasing whoop of the spotted hyena.

Forty years before, we had come to study the elusive brown hyena in this magical place and now, as we were about to remove the last collar from our last cheetah, we observed a thrilling and noisy interaction involving both these animal species. We felt we had come full circle, and had been gifted with a priceless collection of memories and experiences.²

Margie Mills assisted Gus Mills in his research (The Conrad Grebel Review 33, no. 2 [Spring 2015: 212-220]) while raising three children, and worked with women refugees in South Africa.

² Gus and I captured our first sojourn in the Kalahari in the book, *Hyena Nights and Kalahari Days* (Johannesburg: Jacana Media Ltd, 2010).



Mozambique women and children with patchwork clothing. Skakuza Camp, Kruger National Park, South Africa, 2002. Photo credit: Margie Mills

Lust and Domain: The Nature of Birdsong

Lyle Friesen

The most magical time of day, in regard to sound, in late spring and early summer begins in the black of night, an hour or so before sunrise. Then, for a period of several hours forests, fields, and even urban backyards ignite in a blaze of birdsong. The exuberant serenade can be more varied than a symphony, filled with pure, plaintive, and nasal whistles, tinkling and accelerating trills, liquid phrases both short and rambling, and a myriad assortment of accompanying chirps, chips, buzzes, warbles, and twitters. At a first listening, the dawn chorus might seem like sonic chaos. But avian music is anything but a state of aural confusion; each song is eons old, forged and refined by intense evolutionary selection.

Vocal communication is used by all bird species and is perhaps the most complex of all avian behaviors. Males, females, and young birds use distinct calls—brief, simple vocalizations—throughout the year to warn of danger, to scold intruders, to establish contact between individuals, or to serve other specific functions.¹ Calls are innate, and a species might have a dozen or more distinct ones in its vocabulary.² In contrast, songs—more elaborate and more musical than calls—likely evolved for reasons of mate attraction and territory establishment, and are generally delivered only by males in the breeding season.³

Throughout that season, most birds sing more fervently in the early morning, during the so-called dawn chorus, than at any other time of the day. The dawn chorus is a world-wide avian phenomenon.⁴ Several hypotheses have been advanced as to why birdsong is delivered all across the planet so

¹ Paul Ehrlich, David Dobkin, and Darryl Wheye, *The Birder's Handbook: A Field Guide to the Natural History of North American Birds* (New York: Simon and Schuster, 1988), 471.

² Chris Elphick, John Dunning, and David Sibley, eds., *The Sibley Guide to Bird Life and Behavior* (New York: Alfred A. Knopf, 2001), 68.

³ Phil Hockley, "Singing in the Brain," *Wild*, Autumn 2011, 56.

⁴ Donald Kroodsma, *The Singing Life of Birds: The Art and Science of Listening to Birdsong* (Boston: Houghton Mifflin, 2007), 304.

intensely at this particular time. It may be that atmospheric conditions are then especially conducive to transmitting sound over longer distances, or to preserving its tonal quality, or to a combination of the two.⁵ A theory gaining currency among biologists is that the early morning is the best time to gauge a singer's true worth, because it is often the most stressful time of the day.⁶ The dawn temperature is cool and birds have just completed a period of overnight fasting. Birds that broadcast well in such trying conditions are conveying crucial information about their fitness. The quality of the song—its volume, consistency, complexity, and variation—advertises the quality of the singer.

Humans enjoy avian song for its beauty, but for the birds themselves, singing is serious business. Male birds sing to impress their audience. Listeners could include other males who may be prospecting for a territory or looking to improve on an existing one, but may be deterred from making aggressive advances upon hearing a powerful song delivery from an existing territory holder. Males of some species, like Chestnut-sided Warblers,⁷ have separate songs intended only for other males; the message of these songs might be loosely interpreted to mean "Get lost!"

Another equally important listening group is the females. Males of many species often develop bright or gaudy plumage during the breeding season that functions as a sexual stimulant during their courtship rites. But for many females, a male's voice may be an even more powerful aphrodisiac than his colors. A female is choosy about selecting a partner; her nesting season is short, and making the right selection is critical to raising young successfully. By listening carefully to a male's song, she might be discerning something about his age, health, experience, and even the quality of his territory.⁸ These clues allow her to discriminate among the various songsters and identify who among them might be the best defender and provider for her family.

⁵ Ibid., 226.

⁶ Bridget Stutchbury, *The Bird Detective: Investigating the Secret Lives of Birds* (Toronto: Harper Collins, 2010), 74.

⁷ Bruce Byers, Michael Richardson, and Daniel W. Brauning, "Chestnut-sided Warbler," *The Birds of North America Online* (2013), www.bna.birds.cornell.edu/bna/species/190/articles/sounds, accessed July 21, 2014.

⁸ Kroodsma, *The Singing Life of Birds*, 193.

The repertoire of many male birds is more varied and delivered at a much faster rate during the dawn chorus than later in the day. The song rate of Wood Thrushes is three times greater a half-hour before sunrise than three hours later.⁹ An hour before sunrise, Eastern Wood-Pewees whistle a three-song repertoire at a rate of one song every two seconds; later in the day, they sing only two songs and reduce the tempo to one song every ten seconds.¹⁰ Before dawn, Chipping Sparrows unleash staccato bursts of song at a pace of one per second. After sunrise, their song becomes longer and is sung just four times a minute.¹¹ What might explain the accelerated and altered song output in the pre-dawn hour? With some species, perhaps the explanation lies with female choice; studies of Hooded Warblers showed that males who sang more often were more likely to attract females than those who sang less frequently.¹² For other species, the pre-dawn songs are essentially battle cries aimed at rival males, and the rapid pace of delivery signals vigor and resolve.¹³

In North America, the task of singing is usually the exclusive domain of male birds. There are exceptions to the rule, including female Scarlet Tanagers, Northern Cardinals, Rose-breasted Grosbeaks, White-throated Sparrows, Baltimore Orioles, and Red-winged Blackbirds, all of which engage in song but typically in a less effusive manner than their male partners.¹⁴ In the tropics, however, females are much more inclined to sing, and some participate in complex, synchronized duets with their mates that rank amongst the most intricate of all bird vocalizations. These antiphonal duets are often so rapid and finely coordinated that it seems as if they could emanate only from a single bird. Female song may be more common in the tropics than in temperate latitudes because many species are year-round residents, and duets may provide important territorial and mate-guarding functions.¹⁵

⁹ Melissa Evans, Elizabeth Gow, R.R. Roth, M.S. Johnson, and T.J. Underwood, "Wood Thrush," *The Birds of North America Online* (2011), www.bna.birds.cornell.edu/bna/species/246/articles/sounds, accessed July 21, 2014.

¹⁰ Kroodsma, *The Singing Life of Birds*, 396.

¹¹ *Ibid.*, 396-97.

¹² Stutchbury, *The Bird Detective*, 76.

¹³ Kroodsma, *The Singing Life of Birds*, 382.

¹⁴ Don Stap, *Birdsong* (New York: Scribner, 2005), 86.

¹⁵ Adrian Forsyth, *The Nature of Birds* (Rochester, NY: Camden House Publishing, 1988), 52.

The principal apparatus for producing avian sound is the syrinx, an organ unique to birds.¹⁶ The syrinx is located deep in the throat at the base of the trachea, where two bronchial tubes branch off to the lungs. It is unusually efficient at converting the air that passes through it into sound, doing so at a rate of 95 percent, which greatly affects its volume and pitch. The high air-to-sound conversion rate allows even tiny birds such as the Ruby-crowned Kinglet, weighing a mere six grams, to generate remarkable volume. Some birds can produce independent sound at each side of the syrinx, allowing for the emission of two sounds simultaneously. This permits thrushes, for example, to produce rich, ethereal songs that have profoundly moved human listeners.

Not all birds possess a syrinx; the organ is absent in storks, vultures, and ostriches, a lack which explains their limited vocal repertoire and range. By contrast, the syrinx, along with the song-control area of the brain, is most highly developed among passerines (perching birds), perhaps the most familiar group of birds to humans. Passerines are but one of the 30 orders of birds but account for 60 percent of the world's 10,000 avian species.¹⁷ Many of the finest songsters—thrushes, thrashers, larks, warblers, orioles, finches, sparrows—belong to the passerine order.

Passerines are divided into two groups, the oscines and the sub-oscines, based on the structure of the vocal apparatus.¹⁸ Oscine is a Latin term for “singing bird”; sub-oscines, as the name suggests, are the less specialized of the passerine singers. The vast majority of sub-oscine species are found in the New World tropics. In North America, they are represented by the flycatcher family, which in southern Ontario includes common and widespread species such as the Eastern Phoebe, Eastern Kingbird, and Great Crested Flycatcher. Flycatchers have simpler voice boxes and less developed neural song centers than their oscine cousins, and consequently sing simpler and less complex songs. Moreover, their songs are genetically fixed.¹⁹ A young Willow Flycatcher, for example, does not need to hear another of its kind sing in order to learn its characteristic *fitz-bew* song. Like all flycatchers, Willow

¹⁶ Elphick et al., *The Sibley Guide*, 35.

¹⁷ Stap, *Birdsong*, 9.

¹⁸ Kroodsmma, *The Singing Life of Birds*, 79.

¹⁹ Ibid., 87.

Flycatchers are born with their song innately imprinted in their DNA. All individuals of a flycatcher species thus sing their songs in the same way no matter where they live, with no geographic variation in their expression and hence no distinct dialects.

The oscines are the ‘true’ songbirds whose songs are more musical and complex than those of flycatchers. An added distinction is that oscine songs are not instinctive but must be learned.²⁰ Because the songs are learned, initially from listening to fathers (and sometimes mothers) but then later to other adults, there is potential for geographic differences and the development of distinct variants. Not all songbirds develop dialects; Black-capped Chickadees across the continent, except for a few small populations, sing an almost identical, pure whistled *fee-bee*.²¹ But among other species such as Chestnut-sided Warblers, birds just a few kilometers apart may sing very different songs.²² Most songbird dialects are acquired when a young bird disperses from its natal territory and learns its final song dialect after listening to its new neighbors.

Oscine songbirds deprived from listening to adults of their own species are unable to acquire their species’ normal song. Chickadees raised in the lab and allowed to hear songs only of other species were unable to master their proper *fee-bee* song.²³ Similarly for Wood Thrushes; individuals hand-reared from eggs and isolated from conspecifics (organisms belonging to the same species as another) failed to acquire their species’ general song, and the songs they produced were not recognized by other individuals of their kind.²⁴ Oscine birds learn to sing just as humans learn to speak, needing to hear and practice the sounds expressed by adults of their kind in order to master the songs. Beginning at about two weeks of age, songbirds start to copy the songs of their adult tutors, babbling incoherently at first but gradually making improvements. For some species, learning takes place in a relatively brief but critical period during the first fifty days of the individual’s life. For other

²⁰ Stap, *Birdsong*, 84-86.

²¹ Jennifer Foote, Daniel Mennill, Laurene Ratcliffe, and Susan Smith, “Black-capped Chickadee,” *The Birds of North America Online* (2010), www.bna.birds.cornell.edu/bna/species/039/articles/sounds, accessed July 22, 2014.

²² Byers, “Chestnut-sided Warbler.”

²³ Kroodsma, *The Singing Life of Birds*, 137.

²⁴ Evans et al., “Wood Thrush.”

species, learning occurs in stages that may last a full year or more, and for yet other species new songs are added continuously throughout life.

Some songbirds, like Common Yellowthroats and White-throated Sparrows, learn but a single song, although neighboring individuals may each sing a slightly different version of it.²⁵ Other songbirds, such as Gray Catbirds, are more creative and may learn a repertoire consisting of hundreds of different songs.²⁶ The virtuoso of improvisation is the Brown Thrasher, estimated to sing up to 3,000 different songs, which might be a world record for any bird species.²⁷ The thrasher's close relative, the Northern Mockingbird, is an equally impressive singer but offers a slightly different twist; it is a persistent mimic, copying calls and songs of other avian species, sounds of other mockingbirds, vocalizations of non-avian species, and mechanical sounds.

It is a mystery why some species sing only a single song while others muster up hundreds or more. The answer does not seem related to species-versus-species success, because single-song species are apt to be just as abundant and occupy equally large ranges as multi-song species. Rather, the answer probably lies with how a prolific repertoire benefits individuals within a species that uses multiple songs.

Red-eyed Vireos hold the North American title for the number of songs delivered in a day: 22,197 renderings over a 14-hour period.²⁸ Their prodigious vocal output has earned them the name "preacher bird" because of their propensity to drone on hour after hour.²⁹ Recent studies have shown that each male vireo has up to forty songs in his repertoire, and neighboring males have different songs.³⁰ Eastern Whip-poor-wills sing almost as

²⁵ Kroodsma, *The Singing Life of Birds*, 368-69.

²⁶ Robert Smith, Margaret Hatch, David Cimprich, and Frank Moore, "Gray Catbird," *The Birds of North America Online* (2011), www.bna.birds.cornell.edu/bna/species/167/articles/sounds, accessed July 22, 2014).

²⁷ Kroodsma, *The Singing Life of Birds*, 196.

²⁸ L.K. Lawrence, "Nesting Life and Behavior of the Red-eyed Vireo," *Canadian Field Naturalist* 67 (1953): 47-77.

²⁹ Alexander Wetmore, *Song and Garden Birds of North America* (Washington, DC: National Geographic Society, 1964), 253.

³⁰ David Cimprich, Frank Moore, and Michael Guilfoyle, "Red-eyed Vireo," *The Birds of North America Online* (2000), www.bna.birds.cornell.edu/bna/species/527/articles/sounds, accessed July 22, 2014.

much—20,000 times—during a single night as Red-eyed Vireos sing during the day.³¹ Whip-poor-wills, however, have fewer hours than vireos in which to work and therefore have a faster singing rate than not only vireos but perhaps every other bird in the world. They sing only one song, a loud, clear, and simple *WHIP poor WILL*, and repeat it feverishly from dusk to dawn. Careful analysis reveals that the last song of this marathon broadcast is delivered as forcefully and accurately as the first one of the night. Perhaps males are revealing something of their suitability as a mate, or of the quality of their territory, through long and rapid repetition of a single song without any dissolution of tonal quality.

Bird vocalizations are almost universally regarded as the highest and most pleasing natural expression of song.³² The kind of birdsong that is heard, however, is profoundly influenced by humans whose presence and activities change and shape the land and its wildlife. In Waterloo Region, for example, the avian soundscape in 2014 is radically unlike the one that existed in 1800. Then, mature forests covered 80 percent of the countryside³³ and the rich voices of forest birds would have been among its quintessential aural features. By 1900, 85 percent of the once-vast forest had been obliterated to make room for human settlement and agriculture. As the forest dwindled down to small, isolated remnants, so too was its avian choir diminished. Owls, hawks, thrushes, warblers, tanagers, and other species needing deep forests for breeding and foraging became ever more uncommon or disappeared. The Passenger Pigeon, a “living wind”³⁴ that had flown through southern Ontario in flocks massed 100 meters (more than 300 feet) deep and stretching out as far as the eye could see, did not survive the settlers’ onslaught.³⁵ In the place of the forest denizens, the landscape now carried the melodies of open-country birds—kingbirds, bluebirds, bobolinks, meadowlarks, and sparrows—that rapidly colonized the newly created fields

³¹ Kroodsma, *The Singing Life of Birds*, 296.

³² R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT: Destiny Books, 1977), 29.

³³ Regional Municipality of Waterloo, *State of Environment Report* (Waterloo, ON: Planning and Development Department, 1991), 5-17.

³⁴ Aldo Leopold, *A Sand County Almanac, and Sketches Here and There* (London: Oxford Univ. Press, 1949), 109.

³⁵ J. B. MacKinnon, *The Once and Future World* (Toronto: Random House Canada, 2013), 53.

and pastures.

More changes followed. Alien bird species brought to North America in the 1800s—Rock Pigeons, European Starlings and House Sparrows—had a simple formula for success, and that was to associate with humans. Soon they were the most abundant species in cities, towns, and farms, becoming so prolific that they were often reviled as pests. As farming practice intensified in the 20th century, pastures, hayfields, and scrubby margins suddenly became vulnerable themselves. These habitats gave way to broad expanses of monoculture crops, and the open country bird community lost diversity, typically becoming as bland as its cropland environment.

Final Thoughts

It is not just changes to local or regional landscapes that mold the composition of the local bird community. Events thousands of miles away can have equally dramatic effects. Consider the current plight of the Wood Thrush, whose abundance has declined in Canada by 85 percent since 1970.³⁶ The attrition of this species is seemingly at odds with the fact that it is more willing than most other forest birds to accept small, fragmented forests as breeding habitat.³⁷ Forest cover in southern Ontario, where most of Canada's Wood Thrushes breed, has remained stable or even increased slightly in the past 40 years. The problems for thrushes may lie on the wintering grounds—Nicaragua, Honduras, and Costa Rica—where deforestation rates are relentless and accelerating.³⁸ The loss of primary forests there may explain the precipitous drop in the thrush's population size, and underlines the far-reaching, interconnected effects that human activities have on the planet. If the rich, fluting *eo-o-lay* of the Wood Thrush is to be heard in Ontario's forests, efforts must be made to protect and enhance vital habitats in Central America.

There is a simple, easy way for every coffee-drinking North American

³⁶ "A Mixed Report Card for Canada's Species at Risk," Committee on the Status of Endangered Wildlife in Canada [COSEWIC], Ottawa, Canada, www.cosewic.gc.ca, accessed July 22, 2014.

³⁷ L.E. Friesen, M.D. Cadman, and R.J. MacKay, "Nesting Success of Neotropical Migrant Songbirds in a Highly Fragmented Landscape," *Conservation Biology* 13 (1999): 338-46.

³⁸ Calandra Stanley, Emily McKinnon, Kevin Fraser, Maggie MacPherson, Garth Casbourn, Lyle Friesen, Peter Marra, Colin Studds, T. Brandt Ryder, Nora Diggs, and Bridget Stutchbury, "Creating Species-level and Regional Migratory Connectivity Networks by Tracking a Declining Forest Songbird over the Annual Cycle," *Conservation Biology* 29 (2014): 164-74.

to do just that: namely to buy shade-grown coffee. Coffee, one of the most important agricultural crops in Central and South America, can be grown in ways that either support or undermine wildlife.³⁹ Sun-grown coffee is grown in open conditions with liberal applications of herbicides, pesticides, and fertilizers; yields are high but the fields are sterile monocultures devoid of birds, insects, and other wildlife. Certified, shade-grown coffee, by contrast, is grown under a full canopy of native trees and shrubs, and boasts an impressive diversity of wildlife including migratory and resident birds found in number and variety comparable to those in primary forests. Purchasing shade-grown coffee directly supports organic, sustainably grown coffee that provides an economic livelihood for many small landowners while maintaining vital habitat for forest-dependent wildlife.

The magic of birdsong is all around us, and freely available for listening. Indeed, tuning in to the songs of birds is for many humans their most immediate and frequent connection to the natural world. Bird vocalizations, such as the sublime, whistled tones of the White-throated Sparrow or the extravagant cadences of the Hermit Thrush, can have a deep emotional and aesthetic impact on human listeners. For the birds themselves, their songs are part of an exceptionally complex communication system aimed at furthering their reproduction and survival. Humans have made world-wide, sweeping changes to the natural environment that have profoundly influenced the sorts of bird songs that can be heard. The diversity of avian song that will be heard in the future will depend on the sensitivity and concern that we demonstrate for the habitat needs of our co-inhabitants on planet Earth.

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³⁹ S.M. Philpott and P. Bichier, "Effects of Shade Tree Removal on Birds in Coffee Agroecosystems in Chiapas, Mexico," *Agriculture, Ecosystems & Environment* 149 (2012): 171-80.



Brown Thrasher. Carden Plain, Ontario, May 28, 2014. Photo credit: Lyle Friesen

Music Theory is for the Birds

Emily Doolittle

In 1997 I moved to Amsterdam, and shortly after I arrived I heard a bird singing outside my window. I was fascinated by the way small bits of what it sang sounded a lot like human music—clear, pure notes, repeated motifs, scale-like passages, and so on—but the whole of what it sang would never be mistaken for human music. I found out the next day that this was a Eurasian Blackbird (*Turdus merula*), not related to the Red-winged Blackbird (*Agelaius phoeniceus*) with which I was familiar, but part of the thrush family, more closely related to the American Robin (*Turdus migratorius*). I decided to explore Eurasian Blackbird song through writing a piece of music. I began by making a list of the differences between the ways I thought a blackbird and a human might arrange the same motifs. Here are a few:

Figure 1
Blackbird and Human Motif Arrangements

Blackbird	Human
<ul style="list-style-type: none">• Motives repeated unvaried• No harmonic relationship between different motives• Continuous song, no overarching structure• Arbitrary alternation of sound and silence• Rhythm but no meter	<ul style="list-style-type: none">• Motives developed as piece progresses• Harmonic relationship between adjacent motives• “Goal-oriented” structure• Mostly sound, silence used as punctuation• Rhythmic and metric

At that time I was studying with the composer Louis Andriessen. When I showed him my list, he looked at the blackbird side and said, “That sounds like Stravinsky!” Of course, he was right: that while blackbird song might not

sound much like “common practice era” western classical music, there are many kinds of music that do sound like birdsong.

Birdsong can sound like music too, and is often described in musical terms. Some of these comparisons seem irrelevant: a birdsong may have a “flutey sound,” but so does a tea kettle whistling, which would only be considered “music” under the broadest of definitions. And some often-repeated comparisons are wrong. For example, Canyon Wrens (*Catherpes mexicanus*) are frequently described as singing “in the chromatic scale,”¹ which they do not.² But other comparisons may point to deep-seated similarities in structure or function. Indeed, a growing body of zoomusicological literature explores these similarities. The term “zoomusicology,” typically defined as the study of the musical aspects of sound communication in animals, was first used by composer François-Bernard Mâche in his 1983 book.³ Zoomusicology and related fields such as biomusicology and ecomusicology are gradually increasing in prominence. Since the late 1990s, Dario Martinelli has been actively developing zoomusicological methodologies, drawing on his experience as a musicologist and semiotician.^{4, 5} Hollis Taylor⁶ comes to zoomusicological research from a performing background, while David Rothenberg⁷ brings his experience as a performer and a philosopher to the

¹ Charles Hartshorne, *Born to Sing: An Interpretation and World Survey of Bird Song* (Bloomington, IN: Indiana Univ. Press, 1973), 84.

² I analyzed two Canyon Wren songs. One consisted of 11 sliding-pitch notes unequally distributed over a minor 13th (1956 cents), and the other of 15 notes distributed over an 11th (1678 cents). Neither approximated a chromatic scale. [Cents are a logarithmic unit used to describe musical intervals.—Editor] See www.xeno-canto.org.

³ François-Bernard Mâche, *Musique, Mythe, Nature, ou les Dauphins d'Arion* [Music, Myth and Nature or the Dolphins of Arion], French original 1983; published in English as *Music, Myth and Nature*, trans. Susan Delaney (Philadelphia: Harwood Academic Publishers, 1992).

⁴ Dario Martinelli, *How Musical is a Whale? Towards a Theory of Zoömusicology* (Helsinki: International Semiotics Institute/Hakapaino, 2002).

⁵ Dario Martinelli, *Of Birds, Whales and Other Musicians: An Introduction to Zoomusicology* (London: Univ. of Scranton Press, 2008).

⁶ Hollis Taylor, “Towards a Species Songbook: Illuminating the Vocalisations of the Australian Pied Butcherbird (*Cracticus nigrogularis*)” (Ph.D. dissertation, University of Western Sydney, 2008).

⁷ David Rothenberg, *Why Birds Sing: A Journey into the Mystery of Bird Song* (New York: Basic Books, 2005).

field. Others, including Tecumseh Fitch,⁸ approach the relationship between animal songs and music from a more scientific perspective.

For me, some of the most relevant points of comparison between animal songs and human music are those that occur in relation to learning processes, cultural transmission, individual variation, pattern creation, and change over time.⁹

Learning

Though all humans are born able to learn music, we must do so from other members of our species, our “conspecifics.” Songbirds (oscine passerines), too, learn their song from older conspecifics. Just as humans practice music, young songbirds sing fragments of adult song in a flexible, variable form of singing called “subsong.”¹⁰ Humans are the only primate to use vocal learning to any large extent, but a small number of non-human mammals also learn their songs from other members of their species,¹¹ including whales, bats, seals, and elephants.¹²

Culture

Children learn to make the music around them, rather than the music of their genetic ancestors. This is true for vocally learning animals as well. Birds of the same species in different regions may sing different versions of their songs, called “dialects.” Humpback Whales (*Megaptera novaeangliae*) in the same ocean basin sing the same, constantly changing song, but are capable of learning a different song if they come into contact with whales from another ocean basin.¹³

⁸ Tecumseh Fitch, “The Biology and Evolution of Music: A Comparative Perspective,” *Cognition* 100, no. 1 (2006): 173-215.

⁹ The following summarizes some ideas first presented in Emily Doolittle, “Other Species Counterpoint: An Investigation of the Relationship Between Human Music and Animal Songs” (Ph.D. dissertation, Princeton University, 2007).

¹⁰ Clive K. Catchpole and Peter J. Slater, *Bird Song: Biological Themes and Variations*, 2nd edition (Cambridge: Cambridge Univ. Press, 2008), 49-84.

¹¹ Vincent M. Janik and Peter J.B. Slater, “Vocal Learning in Mammals,” *Advances in the Study of Behavior* 26 (1997): 59-99.

¹² Joyce H. Poole, Peter L. Tyack, Angela S. Stoeger-Horwath, and Stephanie Watwood, “Animal Behaviour: Elephants are Capable of Vocal Learning,” *Nature* 434, no. 7032 (2005): 455-56.

¹³ Michael J. Noad, Douglas H. Cato, M. M. Bryden, Micheline N. Jenner, and K. Curt S.

Individual Variation within a Recognizable Style

Two human musicians, trained in the same tradition and performing the same piece, will nonetheless perform it differently. The same holds true for vocally learning birds and non-human mammals. Species-specific stylistic patterns, such as number of repeats, types of sounds used, range, timbre, and so on—mean that despite individual variation, the species identity of the song is rarely in doubt.

Play with Pattern and Noise

In both human music and animal song, there needs to be enough repetition to create a sense of expectation, and enough variety to hold the listener's interest.¹⁴ The unexpected may be heard in relation to what has come previously in a given piece or song, or in relation to what is expected for a particular musical style, or species, or both.¹⁵

Functional Identity with Non-functional Stylistic Change

While variation sometimes exists only in an individual song, it may also lead to cumulative change over time. According to cultural theorist Morse Peckham, an object may be considered aesthetic if “a chronologically arranged sequence of such objects shows both functional identity and non-functional stylistic dynamism.”¹⁶ In human music, style continually varies, even when the performance context remains the same. Humpback Whale song, too, continually changes, but its context—performed by males, primarily during breeding season—stays constant.¹⁷

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Jenner, “Cultural Revolution in Whale Song,” *Nature* 408, no. 6812 (2000): 537.

¹⁴ Hartshorne, *Born to Sing*, 9.

¹⁵ Alexander Goehr, “Music as Communication,” in *Ways of Communicating*, ed. D. H. Mellor (Cambridge: Cambridge Univ. Press, 1990), 141.

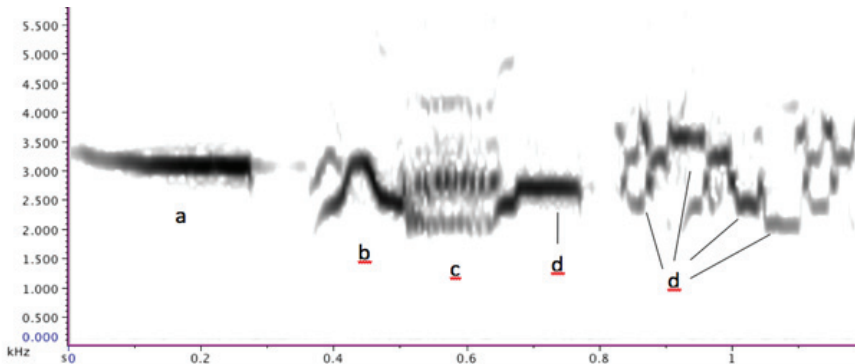
¹⁶ Morse Peckham, *Man's Rage for Chaos: Biology, Behavior and the Arts* (New York: Schoken Books, 1967), 71.

¹⁷ Katherine Payne, Peter Tyack, and Roger Payne, “Progressive Changes in the Songs of Humpback Whales (*Megaptera novaeangliae*): A Detailed Analysis of Two Seasons in Hawaii,” in *Communication and Behavior of Whales*, ed. Roger Payne (Boulder, CO: Westview Press, 1983), 9-57.

Of course this is only a partial list, and other writers might emphasize other aspects. As a young researcher, I wanted to convince everyone that some animal songs should be considered music, but I no longer feel this is important. What is clear to me is that there are enough similarities between some animal songs and some human music that we can use some of the same theoretical tools to look at both. Using the example of the Hermit Thrush (*Catharus guttatus*), I will discuss some of the pitfalls and possibilities of looking at birdsong through a music theoretical lens.

The Hermit Thrush is a small songbird, widespread across North America. Each male sings about six to ten different song-types, separated by silence. Each song-type consists of a long “introductory whistle,” followed by a series of cascading shorter notes (see Figure 2). The song may also contain trills, slides, and multi-pitches, but steady pitch notes predominate.¹⁸

Figure 2
A Hermit Thrush Song-type:
a) introductory whistle, b) slide, c) trill, d) some steady-pitch notes



Hermit Thrush song was a favorite of 19th and early 20th-century North American naturalists. F. Schuyler Mathews, who transcribed the

¹⁸ Emily L. Doolittle, Bruno Gingras, Dominik M. Endres, and W. Tecumseh Fitch, “Overtone-based Pitch Selection in Hermit Thrush Song: Unexpected Convergence with Scale Construction in Human Music,” *Proceedings of the National Academy of Sciences* 111, no. 46 (2014): 16616-21.

songs of more than 100 North American birds into musical notation in his *Field Book of Wild Birds and Their Music* (1904), wrote that Hermit Thrush song is “brilliant in execution beyond description, as versatile in melody as a genius, and as pure in [its] tones as refined silver.”¹⁹ He further believed that the Hermit Thrush had a sense of harmonic progression: “Not content with a single key, he deliberately chose several in major and minor relationship. . . .”²⁰ Theodore Clarke Smith (1903) also noted that the “keys” of the bird’s song “form part of the scale of A flat major.”²¹ Henry Oldys (1913) described one song that “completely satisfies the requirements of human music” with a “harmonic progression—from B to E minor, then to A . . . which leads naturally into D. . . .” Oldys contended that “we must discard the untenable theory of coincidence and declare that the bird expresses itself in human music.”²²

A recurrent idea in early descriptions is that Hermit Thrush songs are based on the pentatonic scale. Such thinking is explicit in an unsigned 1922 *Scientific American* article, which stated that “The Hermit Thrush has the distinction, above all other birds, of having developed the Scotch, or pentatonic scale.”²³ This fit neatly with the notions often held then that the pentatonic scale was “the musical mode instinctively adopted by primitive man”²⁴ and that birds make a sort of primitive music.

Naturalist Anne Wing elaborated on the idea that Hermit Thrush song follows the pentatonic scale in her 1951 article “*Notes on the Song Series of a Hermit Thrush*,” claiming that some songs are “minor [pentatonic],” some “major [pentatonic].”²⁵ Demonstrating this involved some remarkable musical acrobatics (see Figure 3).

¹⁹ F. Schuyler Mathews, *Field Book of Wild Birds and Their Music* (New York: G. P. Putnam’s Sons, 1904), 258.

²⁰ *Ibid.*, 261.

²¹ Theodore Clarke Smith, “A Hermit Thrush Song,” *The Ohio Naturalist* 3, no. 4 (1903): 371–73.

²² Henry Oldys, “A Remarkable Hermit Thrush Song,” *Auk* 30 (1913): 540–41.

²³ “Wild Birds and Their Music,” *Scientific American* 127 (1922): 42.

²⁴ *Ibid.*

²⁵ Anne Hinshaw Wing, “Notes on the Song Series of a Hermit Thrush,” *Auk* 68 (1951): 189–93.

Figure 3
Wing's Transcription of Five Hermit Thrush Songs and the Pentatonic Scales on Which She Believes Them to be Based²⁶



Even setting aside the questions of whether any collection of five notes can be considered a “pentatonic scale,” whether the pentatonic scale is really a human universal, or why a Hermit Thrush would follow culturally-specific human music theory, it is a stretch to say that all these songs have five notes in them. One uses six pitches (though this includes an octave repetition), two use three pitches, and one was un-notatable, leaving only one that actually uses five notes!

Going to such lengths to find pentatonic scales in Hermit Thrush song suggests that Wing started by presupposing that this birdsong must be based on those scales, rather than by simply transcribing and analyzing the pitches she heard. Despite the tenuousness of Wing's findings, her paper captured the imagination of several subsequent generations of researchers. For instance, her research was cited in work by Charles Hartshorne (1973),²⁷ Luis Baptista and Robin Keister (2001),²⁸ and Patricia Gray et al. (2001).²⁹ This latter article, “The Nature of Music and the Music of Nature,” published in the prestigious journal *Science*, lent new credibility to the myth of the Hermit Thrush pentatonic scale. Subsequent writings, such as articles by Natalie Angier (2001)³⁰ and by Terry Bossomaier and Allan Snyder

²⁶ Ibid., 191.

²⁷ Hartshorne, *Born to Sing*, 95.

²⁸ Luis C. Baptista and Robin A. Keister, “Why Birdsong is Sometimes Like Music,” *Perspectives in Biology and Medicine* 48, no. 3 (2005): 426-43.

²⁹ Patricia Gray, Bernie Krause, Jelle Atema, Roger Payne, Carol Krumhansl, and Luis Baptista, “The Music of Nature and the Nature of Music,” *Science* 291, no. 551 (2001): 52-53.

³⁰ Natalie Angier, “Sonata for Humans, Birds, and Humpback Whales,” *New York Times*, January 9, 2001.

(2004),³¹ attribute the pentatonic Hermit Thrush song idea to Gray et al. without reference to Wing's original paper. The pentatonic theory is thus well on its way to becoming "common knowledge," despite there being no substantiated evidence for its veracity.

In the days before recording equipment and analysis software, musical transcription was perhaps the best option for recording birdsong, although the twelve-tone equal temperament bias of western notation meant songs had to be fitted into interval structures that may not have been appropriate. Early naturalists thus mapped what they heard onto what they knew, in a way that may have subjectively evoked the experience of hearing the song but did not necessarily represent accurately what the birds were singing. Perhaps in reaction to the enthusiastic but not very precise approach of the earlier generation of ornithologists and naturalists, many more recent biologists have avoided musical comparisons in their descriptions of birdsong. Here is an example from a 2012 paper about Hermit Thrush song:

Overall, introductory note frequencies... ranged from 1617-5062 Hz. However ... there was a distinct gap in the distribution of introductory note frequencies (ranging between about 3000-3400 Hz), such that introductory note frequencies were not normally distributed throughout their range.³²

This is objectively true, but it gives much less of an impression of what the song sounds like than papers that use musical terminology. Ornithologist Donald Kroodsma has written about Hermit Thrushes alternating between song-types that start with a higher and lower introductory whistles, without examining the exact relationship between the frequencies of the introductory whistles.³³ Other recent writing has avoided the analysis of pitch relationships entirely.

It is understandable that scientists wish to avoid describing birdsongs

³¹ Terry Bossomaier and Allan Snyder, "Absolute Pitch Accessible to Everyone by Turning off Part of the Brain?" *Organised Sound* 9, no. 2 (2004): 181-89.

³² Sean P. Roach, Lynn Johnson, and Leslie S. Phillmore, "Repertoire Composition and Singing Behaviour in Two Eastern Populations of the Hermit Thrush (*Catharus guttatus*)," *Bioacoustics* 21, no. 3 (2012): 239-52.

³³ Donald Kroodsma, *The Singing Life of Birds: The Art and Science of Listening to Birdsong* (Boston: Houghton Mifflin, 2005).

in culturally-specific, human music theoretical terms. However, to abandon any consideration of the relationships between pitches in birdsong risks ignoring an important aspect of how birds may organize their songs. Indeed, there may be a rich area of analysis that involves using scientific means to insure, on the one hand, that one is not merely projecting the familiar onto birdsongs, and, on the other, to better understand what the birds are doing.

In 2008 I embarked on a collaborative research project with evolutionary and cognitive biologist Tecumseh Fitch, music theorist and cognitive biologist Bruno Gingras, and computational psychologist Dominik Endres, to examine Hermit Thrush song. We began by listening as a musician might, slowing recordings by a factor of 6 to bring them into a comfortable frequency range and tempo for human auditory processing. To our amazement, we heard immediately that many of the song-types seemed to follow the overtone series. The birds never sang the fundamental of the series—which would be too low for a bird of that size to produce—but for most of the song-types, there was an imagined fundamental, above which they sang exclusively pitches drawn from the harmonic series, usually from harmonics 3 through 12.³⁴

In order to move beyond the exciting, but thus far only anecdotal, experience of hearing the overtone series in Hermit Thrush song, we gathered recordings of 14 Hermit Thrushes from the Borror Laboratory of Bioacoustics at Ohio State University, Kevin Colver, and Bernie Krause. These birds sang a combined total of 114 different song-types. Using Praat sound analysis software,³⁵ we measured the frequencies of all the steady-pitch notes in each of the 71 song-types that had 10 or more such notes. Song-types with fewer than 10 notes were excluded because their following the overtone series could not be determined with as much certainty. We then used both a Bayesian generative model created by Endres and a linear regression model created by Gingras to analyze the frequencies in each song. Both models independently confirmed our aural impression that about 70 percent of the song-types follow the overtone series.

The Hermit Thrush songs included sliding pitches and some song-

³⁴ Doolittle et al., “Overtone-based Pitch Selection in Hermit Thrush Song.”

³⁵ Paul Boersma and David Weenink, *Praat* 5.1.29 (1992-2010), www.praat.org, accessed June 18, 2012.

types that did not follow the overtone series. This strongly suggests that the birds were selecting the overtone-based pitches from a much wider range of possibilities. They are thus not like a bugle that is capable only of producing pitches from the overtone series, but like a human singer who might choose to sing in imitation of the bugle's overtone-derived pitches. The overtone series is rooted in physics, not in culturally-specific human music theory, so it makes sense that it might be found in some non-human species as well. Because many scales can be derived from this series, it is understandable that earlier listeners, without recording equipment or analysis software, mapped what they heard onto what they knew. Harder to grasp is why the myth of Hermit Thrush pentatonic scales continues to be perpetuated, now that it can be so readily falsified!

Many other aspects of Hermit Thrush song remain to be studied. Musical analysis may help us make sense of rhythms, timbres, or the trills, slides, and other noises that are part of the song. Biological observation may help us figure out which birds sing which songs and under what circumstances. A combination of both might help us figure out why this bird sings songs based on the overtone series. Beyond the Hermit Thrush, there are thousands of other species of song-learning birds, and dozens of species of song-learning mammals, whose songs might be better understood by combining music theoretical and biological methods. Indeed, several individuals and groups with interdisciplinary training are beginning to shed light on the internal structures of various animal songs. Hollis Taylor has conducted perhaps the most extensive zoomusicological research to date on a single species, the Pied Butcherbird (*Cracticus nigrogularis*),^{36, 37} while an interdisciplinary team consisting of David Rothenberg and four scientists has recently explored the song of the Thrush Nightingale (*Luscinia luscinia*).³⁸

I certainly would not propose that there is a cross-species, universal music. The idea of a universal music is problematic even within the human species. However, given that we share similar biology, similar physics,

³⁶ Taylor, *Towards a Species Songbook*.

³⁷ Hollis Taylor and Dominique Lestel, "The Australian Pied Butcherbird and the Natureculture Continuum," *Journal of Interdisciplinary Music Studies* 5, no. 1 (2011): 57-83.

³⁸ David Rothenberg, Tina C. Roeske, Henning U. Voss, Marc Naguib, and Ofer Tchernichovski, "Investigation of musicality in birdsong," *Hearing Research* 308 (2014): 71-83.

and similar environments with other species, it is not surprising that we sometimes come up with similar ways of organizing the sounds we make.

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SECTION IV

“Attending to the Sacred”: Ritual, Song, and Angel Wings

Inspiration, Imitation, and Creation in the Music of Bali, Indonesia

Maisie Sum

From the gecko's lone call to frog choruses, from crashing waves to delicate snowfall, the sonic environment has long been a source of inspiration for many Balinese artists. Through the use of mimicry, subtler forms of imitation, and conceptual frameworks, soundscapes have been interpreted, transformed, and imagined in music creations ranging from melodic phrases to entire compositions to new art forms that may be recognizable, alluded to, or remain abstract. Drawing on previous scholarship on Balinese music and on conversations with teachers, friends, and family from Bali, Indonesia,¹ this preliminary study explores connections between musical creations and the soundscapes of nature, real and imagined, in Bali and offers a glimpse into the aesthetic sensibilities of Balinese artists. Given the intensity and rapidity of change in the global landscape and soundscape, I hope to make explicit the influence of nature's voices on musical genres, explore modern creations of Balinese composers, and stimulate further Balinese music research in the area of sound and environment.

Inspiration and Embodiment

My frequent visits to Pengosekan village in Ubud, Bali and my travels throughout the island reveal that the Balinese people live intimately and in tune with nature. Perhaps it is because most people in areas outside the dense city centers spend most of their time outdoors that the rhythm of life seems in sync with the seasons, daylight hours, other diurnal creatures, and the rise and fall of temperatures. Many people rise at dawn, take strolls in the morning or before sunset, have siestas during the hottest part of the day, bathe in the river before dusk, eat fruit as it ripens and falls off the trees, and retire from the day's activities as the sun descends beneath the horizon.²

¹ Bali is an island and province of Indonesia.

² Exceptions have been observed among the youth community, in larger cities, and during major festivals.

Daily activities see farmers tending to their rice paddies; fishermen working out at sea; women making offerings out of banana leaves, freshly picked flowers, fruit, and leaves; and young girls sweeping the land with coconut leaf brooms. At a young age, children become acquainted with the texture, smells, sights, and sounds of nature. They fly kites as a pastime and play in the rice fields. Once a year, on *nyepi*, the annual Day of Silence festival, the whole island shuts down as an act to reinvigorate Mother Earth.³

Pavilions and houses are built for sleeping or for storage and have large verandas. Many people spend more than ten hours of their day outdoors, working, eating, and socializing on the verandas, effectively attuning themselves to the sounds of nature. They wake up to the overlapping crowing of roosters; they hear the birds sing, the dragonflies hum, the gentle breeze rustle the leaves, and the rain pitter-patter on the tall coconut leaves. In the evening, they take in the splendor of sonic layers and interlocking patterns created by amphibians and reptiles of all sizes, shapes, and sounds—most typically frog choruses and the call of the large *tokeh* gecko. For many Balinese, constant exposure to the outdoors fosters a sensibility to nature and its soundscape, and shapes a fundamental part of their habitus.⁴

In addition to work and play, the connection to nature is deeply embedded in their belief system. In accordance with the *lontar*, the sacred text of the Balinese Hindu people, house compounds and pavilions are built in harmony with nature. The size and location of a pavilion, the position and distance of pavilions to each other, and their distance from the brick wall demarcating their land represent some of the spatial aspects that are carefully considered with regard to wind currents, the trajectory of the sun, and the direction of the mountain and rivers. Belief in geomancy—the auspicious spatial arrangement of objects, buildings, and other sites—is not unique to Bali; it is also found in China, where it is called *feng shui* (“wind water”). Similarly, the spatial template serves spiritual and practical

³ During *nyepi* the use of electricity and motor vehicles is restricted. People are mindful of their behavior and emotions, speaking in a deliberate, calm manner. Some use the opportunity to undertake a one-day silent meditation that may include fasting.

⁴ The term “habitus,” as elaborated by Pierre Bourdieu, refers to a dynamic system of dispositions and values that are determined by and continuously influenced by one’s environment, perceptions, and interactions. See Pierre Bourdieu, *Outline of a Theory of Practice*, trans. Richard Nice (Cambridge: Cambridge Univ. Press, 1977), 2.

purposes. For example, when constructing a house compound, builders must divide the land proportionately and include a family temple in the northeast corner—the space closest to the sacred Mount Agung and the sunrise. The west pavilion is designated for guests because of its favorable position—the veranda receives a pleasant breeze and is sheltered from the glaring hot afternoon sun.

Connections to nature are also embedded in musical tones. The tones associated with the *pélog* tuning system are considered *Panca Tirtha* (five holy waters),⁵ and correspond to the light and cardinal positions that have origins in the creation of the universe. The symbolism attached to musical tones is privileged information, of which only a few Balinese musicians have knowledge or awareness. For some composers, these philosophical aspects may govern the structure and development of their musical work, while the sounds of nature provide a vital inspiration.

Figure 1
**The Five Tones of Pélog Represented by the
 Balinese Solfège System**
 Adapted from Tenzer⁶

Cardinal position	Color	Tone
East	white	<i>dang</i>
South	red	<i>ding</i>
West	yellow	<i>deng</i>
North	black	<i>dung</i>
Center (above)	five colors	<i>dong</i>

Below I will explore how soundscapes of the island have served as sources of inspiration for *genggong* (Balinese mouth harp), a vocal genre called *kecak* (ke-chack), and compositions written for Balinese gamelan.

⁵ Indonesian music employs two tuning systems: *pélog* and *slendro*. See Michael Tenzer, *Gamelan Gong Kebyar: The Art of Twentieth-Century Balinese Music* (Chicago: Univ. of Chicago Press, 2000).

⁶ *Ibid.*, 35.

Imitation and Creation

Genggong

The Balinese mouth harps *enggung* and *genggong* are carved from the leaf stem of the *jaka* sugar palm tree.⁷ There is speculation that the more complex *genggong* was developed from the simpler *enggung*. *Enggung* refers to one of many species of frogs in Bali.⁸ According to ethnomusicologist and mouth harpist Deirdre Morgan, “the term ‘genggong’ is probably pure onomatopoeia,”⁹ associated with the sound of the *enggung* frog. While the origins and history of the *genggong* remain uncertain, most Balinese people agree that rice farmers invented the instrument.¹⁰ In addition to playing melodic material, interlocking figurations may be created when the *genggong* are played in pairs or larger groups (typically four to eight players).¹¹ According to Balinese musician and composer I Dewa Madé Suparta, the interlocking melodies were inspired by the overlapping croaking of *enggung* frogs heard after the sound of a heavy rainfall.^{12, 13}

Kecak

Kecak is a popular vocal genre most often associated with a chorus of people chanting “cak” (*chack*)—a vocable that forms the basis of a variety of interlocking patterns. However, it is really an art form that combines dance, drama, and vocal music, inspired by the *Sanghyang Dedari* purification ritual. Although often called the Monkey Chant, the term *kecak* is derived from *cicak* (chi-chack), the Balinese name for gecko, which is onomatopoeia for a clicking sound that the gecko makes.¹⁴ When this sound is made during activities such as speaking or praying, it is taken as a positive sign, an affirmation from the heavens. A Balinese priest explained this to me when a

⁷ Balinese terms such as *enggung* and *genggong* are both singular and plural.

⁸ Deirdre Anne Elizabeth Morgan, “Organs and Bodies: The Jew’s Harp and the Anthropology of Musical Instruments” (M.A. thesis, University of British Columbia, 2008), 33.

⁹ Ibid., 33, footnote.

¹⁰ Ibid., 36.

¹¹ Sound sample at www.youtube.com/watch?v=PzJUlsrNpI.

¹² Personal communication, March 2014.

¹³ Interlocking figuration is a characteristic feature of Balinese music.

¹⁴ I Wayan Dibia, *Kecak: The Vocal Chant of Bali* (Denpasar, Indonesia: Hartanto Art Books Studio, 2000). Sound sample at <http://picosong.com/5p7X/>.

gecko clicked during prayer in his temple. Balinese friends express the belief by acknowledging the clicking sound with a head nod during conversations, particularly when discussing matters of significance. Speculation suggests that over time the cicak sounds were incorporated into ritual practice.

Artist Walter Spies, a Russian-born German expatriate, was fascinated with the *Sanghyang Dedari* ritual. In the 1930s, he and I Wayan Limbak, a dancer and choreographer from Bali, created an early form of *kecak*.¹⁵ Elements of the ritual were adopted, transformed, and combined with a storyline and existing dramatic movements of solo dancers depicting episodes of the Indian epics, the *Mahabharata* and *Ramayana*.¹⁶

To be sure, the *cak* chorus heard during the purification ritual imitated the affirming call of the gecko. As early as the '30s, *kecak* was known by “the nickname of ‘monkey dance.’”¹⁷ This association continued through the 1970s with the standardization of *Kecak Ramayana*, and is still made today, as seen on concert brochures in Bali and abroad, in advertisements, and on internet travel sites. A common storyline of *Kecak Ramayana* is the abduction of Sita, wife of the Hindu God Rama, by Ravana, the king of demons. Rama enlists the help of the monkey king Hanuman, who calls upon the monkeys of the forest. The *cak* chorus represents the community of monkeys working together to rescue Sita.¹⁸

German scholar Kendra Stepputat observes that Balinese composers were developing an alternative form of *kecak*—*kecak kreasi* (*kecak* creation)—at the same time as *Kecak Ramayana* in the '70s. Today, both forms of *kecak* continue to exist, one aimed at tourists and the other “generally aimed toward a Balinese audience, though it draws tourists and expatriates as well.”¹⁹ Composers and choreographers of *kecak kreasi* push creative boundaries by setting the musical dance drama to storylines inspired by Balinese history, everyday life, and whatever the imagination holds, rather than by drawing solely from Indian epics. They also add new movements and vocables:

¹⁵ Kendra Stepputat, “Performing *Kecak*: A Balinese Dance Tradition Between Daily Routine and Creative Art,” *Yearbook for Traditional Music* 44 (2013): 50-55.

¹⁶ See Dibia, *Kecak: The Vocal Chant of Bali*.

¹⁷ Walter Spies and Beryl de Zoete, *Dance and Drama in Bali* (1938; repr. Singapore: Periplus Editions, 2002), 83.

¹⁸ Sound sample (starting at 2:20): www.youtube.com/watch?v=TINNKGdHcp4.

¹⁹ Stepputat, “Performing *Kecak*,” 62.

“Dibia [a choreographer of *kecak kreasi*] said that many of the movements he uses are an ‘imitation of nature.’”²⁰ In addition to the typical “cak”, the 100-person chorus chants vocables such as “cik” or “cuk”, hisses, “sh”, and nature sounds that may have corresponding body movements. Ideas from the alternative form have made their way into *Kecak Ramayana*. Forming the live scenery for it, the chorus represents the monkey army (of the earth), and the forces of nature—water, wind, and fire—are imitated in their chants and movements.

Balinese Gamelan Music

In order to explore how the sonic environment is featured in Balinese gamelan, I turn now to a brief discussion of *ombak* and the repertoire of Balinese music.

“Gamelan” refers to a set of percussive instruments made of bronze, iron, or wood that may number from two to fifty pieces. Fundamental to the aesthetic of gamelan music is *ombak* or “wave” in the Indonesian and Balinese languages, which refers to what ethnomusicologist Andrew McGraw calls “fluctuations in temporal and dynamic flows in Balinese gamelan repertoire generally. These waves are iconic of ocean waves, dance motions, musicians’ movements, and their breath.”²¹ In a conversation with McGraw, Balinese composer I Wayan Gdé Yudane suggested that Nyoman Rembang, a renowned theorist on Indonesian music, “likened such musical flows to surfing . . . suggesting that melodies (in *gamelan*) are carried like a surfer on swelling and ebbing waves.”²² *Ombak* can be heard in the gongs and is also created by paired tuning (i.e., intentionally tuning the same notes of paired instruments slightly apart). For many Balinese musicians and listeners, *ombak* is the primary aesthetic.²³

An examination of composition titles belonging to popular, ritual, and contemporary gamelan repertoire further attests to the connection and inspiration that many Balinese artists have with, and receive from, their natural surroundings (Figure 2).

²⁰ Ibid.

²¹ Andrew Clay McGraw, *Radical Traditions: Reimagining Culture in Balinese Contemporary Music* (New York: Oxford Univ. Press, 2014), 168.

²² Ibid.

²³ Ibid.

Figure 2
**Compositions Inspired by the Sounds, Movements,
 and Images of Nature²⁴**

Composition Title	Translation	Composer	Date
<i>Merak Ngelo</i>	Peacock swaying from side to side	Unknown	Unknown
<i>Cicak Megelut</i>	Gecko embracing	Unknown	Unknown
<i>Jagul</i>	Fish	Unknown/I Wayan Beratha	1400–1900
<i>Candra Wasih</i>	Birds of paradise	I Nyoman Windha	1991
<i>Nir Jara</i>	Waterfall	Dewa Putu Rai	2003
<i>Kété-kété</i>	Cicada	I Dewa Made Suparta	2003
<i>Salju</i>	Snow	Dewa Ketut Alit	2007

For example, *Merak Ngelo* and *Cicak Megelut* (Rows 1 and 2) are both inspired by the movements of creatures. Dewa Ketut Alit was inspired to compose *Salju* (Row 7) after experiencing a winter season in Canada. While some contemporary pieces may not be known to the general Balinese public, they would be familiar to Balinese artists, particularly composers who are keenly aware of each other's output and form a tight-knit community. Common among these compositions is sonic imitation of the sounds, movements, and visual imagery of nature, real or imagined, in direct or abstract ways that may or may not be recognizable. Nonetheless, the composition's title is likely to evoke a shared sentiment among listeners and guide their imaginations as the composition unfolds.²⁵ Here I will briefly discuss two of these compositions.

Kété-kété is the name of one of many species of cicadas found in Bali. In 2003, a group of musicians in North Bali (Gamelan Dwi Mekar) commissioned a piece by I Dewa Madé Suparta for the Annual Bali Arts Festival, which caters largely to the local public, though gamelan enthusiasts

²⁴ The original composer of *Jagul* is unknown; however, the piece is performed with portions of it arranged by I Wayan Beratha.

²⁵ The title of a composition may reveal its intended sentiment and be felt in a general way by those who know the language or are provided with a translation, and by listening to psychophysical cues such as the dynamics, tempo, rhythm, and melodic contour. Knowledge of culture-specific cues (e.g., the selection of pitches, musical form, social constructs, local environment) potentially contributes to a deeper experience of the intended sentiment.

from around the world, tourists, and expatriates may attend (and sometimes perform). The festival's theme that year was the natural environment. In preparation for this event, ensembles normally rehearse three to six hours a day over a period of three months. Living in the south of Bali, nearly a four-hour drive from Singaraja where the group resided, I Dewa Madé Suparta was invited to stay with the artists. In North Bali, the *kété-kété* cicada is abundant and the overwhelming buzz of hundreds of them, if not thousands, is heard daily.²⁶ These creatures became the source of inspiration for Suparta's composition. While the theme of the *kété-kété* plays out in abstract ways, imitative passages are also heard throughout this piece. Pitches combine and interlock in unconventional ways to create a multi-layered texture that mimics the cicada's buzzing.²⁷

Jagul refers specifically to fish in the sea.²⁸ It was composed for the *gamelan gong gede*, an ensemble of large iron metallophones and gongs played by up to 50 musicians that exudes majesty and grandeur, as befits the sea. Categorized under the *lelambatan* or "slow music" genre of Balinese gamelan music, it also evokes a feeling of timelessness. *Lelambatan* is characterized by long gong cycles (256 beats may elapse between two gong strokes). Like many compositions belonging to this genre, *Jagul* is long and complex, and it takes more than 29 minutes to perform. Throughout the piece the melody alludes to the greatness and calm of the sea, and variations in the musical texture reflect its unpredictable and changing conditions. After "being at sea" for 23 minutes, the drum evokes the playfulness of fish jumping out of the water (Figure 3).²⁹ Each line represents two 8-beat phrases which correspond to the gong cycle.

²⁶ Sound sample at www.youtube.com/watch?v=zlNDUnGNvfg.

²⁷ Sound sample 1 at <http://picosong.com/5pMx/> and sound sample 2 at <http://picosong.com/5pMd/>.

²⁸ *Jagul* is the name of two other pieces belonging to two distinct repertoires (*Semara Pegulingan* and *Bebarongan*). It is not unusual and unique to music in Bali for different pieces to share the same name but have different meanings. Conversely, the same piece may be given different names.

²⁹ Sound sample at <http://picosong.com/5p7y/>.

Figure 3
An Extract of the Drum Pattern in Jagur that Evokes Fish
Jumping out of the Water

<i>du</i> <i>da</i>	<i>dut</i> <i>da</i>	<i>du</i> <i>da</i>	– –	<i>du</i> <i>da</i>	<i>dut</i> <i>da</i>	<i>du</i> <i>da</i>	– –	<i>du</i> <i>da</i>	<i>dut</i> <i>da</i>	<i>du</i> <i>da</i>	– –	<i>du</i> <i>da</i>	<i>dut</i> <i>da</i>	<i>du</i> <i>da</i>	– –
<i>du</i> <i>da</i>	– –	<i>du</i> <i>da</i>	<i>du</i> <i>dat</i>	– <i>ka</i>	<i>pak</i> <i>ka</i>	<i>pak</i> <i>ka</i>	<i>pak</i> <i>ka</i>	<i>pak</i> <i>du</i>	<i>da</i> <i>du</i>	<i>du</i> <i>da</i>	<i>du</i> <i>da</i>	<i>da</i> <i>du</i>	<i>da</i> <i>dut</i>	– <i>ka</i>	<i>pak</i> <i>ka</i>

* * * * *

The soundscapes of Bali, like other places in the world, have been impacted by industrialization, commercialization, and tourism. In the village of Pengosekan, the frog choruses that once inspired *genggong* music are no longer heard just beyond the gate of house compounds but are now found in more distant rice fields and river streams. The gentle rustling of palm leaves is mixed with the din of motor vehicles congesting the narrow village roads. Fewer than forty years ago, the intermittent engine sound of a scooter humming over a gravel road was cause for excitement among villagers, who would run out of their house compounds in awe. Today, the sounds of revving engines—large and small, from tour buses to scooters—and impatient horns, cause fear, frustration, and stress in the community.

In spite of this, the beliefs and values of the Balinese Hindu people promote preservation and protection of their environment. As I mentioned earlier, the *lontar*, their sacred text, serves as a guide to living in harmony with nature. Geomancy governs the construction of house compounds and pavilions, and ensures that a symbiotic relationship between humans and the forces of nature is maintained. Furthermore, the height of buildings is restricted to three levels, and until recently the building of large bridges, tunnels, and underground roadways was prohibited. For the time being, the respect and support of village leaders—as well as that of government officials with the power to grant and deny construction permits—has ensured that the first drops of rain are heard on the treetops.

Fundamental alterations to the landscape and soundscape seem imminent as the government of Bali considers the latest tourism development plan to construct luxury facilities and hotels, apartments, a large theme park,

and entertainment centers on reclaimed land at Benoa Bay in the southern part of the island. The proposal for this major reclamation project has met with disapproval and province-wide demonstrations. In recent months Balinese artists have come together and constructed a makeshift stage in the bay, where they gather to voice their opposition and concerns, through new musical creations, over environmental destruction.

Unique artistic expressions—inspired by both visceral experiences and conceptions of nature—may evoke nostalgia for past or disappearing sounds, or can serve as wake-up calls for changes, some of which are inevitable and others still uncertain. In this paper I hope to have illustrated the vital role of Balinese artists as historians and activists in sounding their environment.

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“Sound is the Blood between Me and You”: Toward a Theology of Animal Musics

Trevor George Hunsberger Bechtel

Every night before we go to sleep, my wife Susan sings an old gospel song or a hymn in a voice that she shares with her Aunt Kathryn of blessed memory. Sometimes within a couple of notes or within a couple of verses, but always without fail, our cat Neko will come running and jump up on the bed, issue forth a couple of percussive improvisations on the theme and demand some petting. On the evenings that Susan chooses “May God Grant You Blessing” it seems clear that Neko is also demanding a blessing, in the way that a cat will do. This ritual is my main experience of interspecies musical appreciation, and it is admittedly a simple, highly personal interaction. However, because this ritual is personal, because I know Susan and Neko, and because I have observed and participated in it countless times, I submit that my narrative is trustworthy. The individual cat Neko will indeed reliably perform this way in response to the music that the individual human Susan creates.

In this paper, I engage in a speculation about the meaning of interspecies musical appreciation beyond this particular interaction. This speculation will involve a number of stories of humans and animals, and the attention that each brings to the creation and appreciation of music. My claim is that interspecies musical appreciation holds great promise for furthering attention to, connection between, and, ultimately, understanding of different species. Our grasp of how animals hear and receive music augurs a new reality of harmony between species because of the way that music, appreciated, equalizes and grounds communication between humans and other species.

A great deal of brush clearing could be done at this point. What is music? Is any sound music once it is appreciated as such? Who can make music? How much training does one need in order to make music? How much practice is required? What does it mean to appreciate music? To hear it? To pay attention to it? To understand it? To be moved by it? Additional

questions quickly arise: What are the connections between music and language? Did human speech originate in music? Is music evolutionarily superfluous? Are signal response systems in animals similar to birds' music, to human language, or are they something other? These are interesting and important questions. I hope by the end of this paper to have brushed up against some of them, but they will not occupy the center of attention. There are, however, two questions that should not be avoided—questions of theology and of anthropomorphism.

What follows is a kind of theology of the natural world. Theology in its most basic definition is “God-talk”; natural theology is a type of theology that looks for the ways that God has revealed Godself in the natural world. All theology is highly speculative; evidence is found in the structure of faith, the structure of the believing community, and the ways in which the discussion builds up an understanding of how God works in our midst. Theology is a meaning-making discipline. It is scientifically responsible, but good theology is not necessarily dependent on any other discipline.

The best example of the kind of theology practiced in this paper is the bestiary tradition, which extends across the entire history of Christianity. In this tradition, Christian thinkers have reflected on the lives of animals in order to understand how God's will for human life has been revealed through those lives. What matters most, then, in terms of theological method is that the speculation in this paper reveals something about God in its attention to interspecies musical appreciation. In method, the approach taken here is more medieval than modern, although I am not pretending to have found a way to escape modernism.

Anthropomorphism is the application of properly human characteristics to non-human animals. The claim that a dog is loyal is anthropomorphic, because loyalty is a human characteristic. For many years anthropomorphic claims, including the possibility of animals thinking and possessing emotion, were anathema in science. Philosopher and bioethicist Bernard Rollin offers a convincing argument that the anti-anthropomorphic bias in science has the characteristics of an ideology, and that animal mentation and arguments from anecdote and individual animals have a place in science.¹ The work

¹ See Bernard E. Rollin, “Scientific Ideology, Anthropomorphism, Anecdote, and Ethics,” in *The Animal Ethics Reader*, ed. Susan J. Armstrong and Richard G. Botzler (London: Routledge, 2003) for an early expression of this sentiment.

of Jane Goodall, Dian Fossey, and Biruté Galdikas established important similarities between human experience and the experience of other animals, particularly in terms of shared emotions. While the anthropomorphic description of animal experience and the reliability of anecdote as scientifically relevant have become generally more accepted, the debate is still active in popular and scientific contexts. The present paper is written inside a particular framework of Christian theology that suggests God creates human and non-human animals with much in common, possibly including emotion, mentation, and an appreciation for music.

One example of my type of approach is provided by a cockatoo named Snowball. Cockatoos, like several other similar species of birds and only a few other animal species including our own, are capable of mimicry. They also live very long lives. As often happens to these birds, Snowball outlived his desirability as a pet in several households before ending up with a family in Indiana. He bonded with a girl in the family, but when she left for college Snowball wasn't receiving the attention he needed and was given to a rescue shelter. At some point the bird figured out that he loved to dance, as can be seen on YouTube. His favorite song is the Backstreet Boys' "Everybody 'backstreets back'".² He bobs his head and moves around, and it looks on the screen like a cockatoo dancing.

In a recent study, psychologist Aniruddh Patel and colleagues produced versions of Snowball's favorite song that were both slower and faster than the original. In each case, the cockatoo was able to find the beat and dance to it with a reliability exceeding statistical probability.³ Snowball can't be hitting the beat by chance; he is synchronizing his movements to the music. In ordinary language, he is dancing. Adam Loberstein, writing in the *San Diego Union-Tribune*, summarizes the context for these findings: "Moving rhythmically to a musical beat is a behavior found in every human culture, but it is not commonly seen in other animals," according to Patel. 'It is a remarkable fact that despite decades of research in psychology and

² Available at www.youtube.com/watch?v=N7IZmRnAo6s, accessed February 9, 2015.

³ Aniruddh D. Patel, John R. Iversen, Micah R. Bregman, Irena Schulz, and Charles Schulz, "Investigating the Human-specificity of Synchronization to Music," in ed. M. Adachi et al., *Proceedings of the 10th International Conference on Music Perception and Cognition, August 2008, Sapporo, Japan* (Adelaide, Australia: Causal Productions, 2008), 1-5.

neuroscience in which animals have been trained to do elaborate tasks, there is not a single report of an animal that was trained to tap, peck or move in synchronicity with an auditory beat,' he [Patel] wrote in a 2006 journal article."⁴

Dancing is an important way that music is appreciated. Snowball often attempts to hit the beat but misses. Generally, his dancing becomes more accurate the faster the music goes. Before Snowball, no one thought that beings other than human animals could dance. Granted, stories and accounts of medieval fairs, carnivals, and even current circuses have dancing bears, monkeys, elephants, and other animals, but the animals' training is not about synchronizing to a beat. The ability to do what Snowball does is tied to the evolution of complex vocal learning,⁵ and the kind of mimicry that cockatoos and similar birds are capable of is a key form of that learning.

There are many other stories of animals appreciating human music. One recent research study by clinical scientist Lori Kogan and colleagues at Colorado State University investigated what kind of music shelter dogs prefer: classical (Bach, Beethoven, or Johann Strauss), heavy metal (Motorhead, Slayer, or Judas Priest), or a control (that is, no music at all). Many animal studies are required by ethical research boards to include environmental enhancements for their captive animals, and music is a typical choice. In this particular study, the dogs liked classical music⁶—or at least they became less stressed when listening to it. However, psychologist Charles Snowdon and composer David Teie think that this type of research goes about examining appreciation in the wrong way. Snowdon and Teie found that a group of Tamarin monkeys were agitated by human music but calmed by species-specific music that Teie created for them based on biological cues, specifically heart rate.⁷ Consequently, Teie has correlated the tempo of species-specific

⁴ Adam Loberstein, "Snowball's Chance," *San Diego Union-Tribune*, August 14, 2008, www.utsandiego.com/uniontrib/20080814/news_1c14bird.html.

⁵ Victoria Williamson, "Why Don't Dogs Dance?" *Music Psychology*, May 1, 2014, musicpsychology.co.uk/why-dont-dogs-dance, accessed February 19, 2015.

⁶ Lori R. Kogan, Regina Schoenfeld-Tacher, and Allen A. Simon, "Behavioral Effects of Auditory Stimulation on Kenneled Dogs," *Journal of Veterinary Behavior: Clinical Applications and Research* 7, no. 5 (2012): 268-75.

⁷ C.T. Snowdon and D. Teie, "Affective Responses in Tamarins Elicited by Species-specific Music," *Biology Letters* 6, no. 1 (2010): 30-32.

music with the heart rate of certain species, and now sells such music for cats.⁸

Of the many possible questions here, I will try to address a few. The classical and heavy metal music used in the first study was said to have been chosen based on its “popularity,” a term not well defined within the study. Many humans who appreciate music would eschew popularity as a first and only metric for a particular music’s desirability. The use of no music as an experimental control is also interesting from a musical perspective, as is the idea that biology should have a connection to music appreciation. The study provides many details about the volume, equipment, and context into which the music was played. However, few details are given about how the music was chosen. Beyond questions of study design, we could ask what counts as appreciation. Why is calmness rather than agitation desirable? For whom is it desirable? The song “Romance,” by Carrie Brownstein and her band Wild Flag, comes to mind here:

You watch us dance, we dance ’til we’re dying
We dance to free ourselves from the room
We love the sound, the sound is what found us
Sound is the blood between me and you.⁹

Like the dogs and Tamarin monkeys in these studies, I respond differently to different genres of music at different times. Sometimes I want to feel calm, so I listen to early Bruce Cockburn, Bon Iver, or Sufjan Stevens. But often I want music to agitate me, so I appreciate sound that finds me and frees me from the room: this is when I listen to Wild Flag, Sleater-Kinney, or some other band in which Carrie Brownstein plays. There is a good chance that dogs and humans may appreciate music differently, but in thinking about interspecies music appreciation, questions of what truly shows appreciation should be carefully considered.

Humans like various kinds of music, and they like music in differing ways. They appreciate music not just in degree but also by genre and while listening, playing, creating, or dancing. They may even argue about music although they are all members of the same species. Such obvious differences

⁸ See musicforcats.com.

⁹ Wild Flag, *Wild Flag* (Merge Records, 2011) [CD MRG 411 Advance].

among humans suggest a need to consider the differences between individual animals and among species in animal musical appreciation. In addition to exploring the appreciation of human-created music by non-human animals, we can also consider the appreciation of animal songs by humans. I will leave it to others to make the case that animals are indeed music makers, but it is clear that humans do appreciate music of animals. Recordings of whale song, natural soundscapes, and especially bird song create a small but vibrant market in their corner of iTunes, Amazon, and brick-and-mortar stores. I personally appreciate the white noise app, which helps me fall asleep to several animal song settings, including a cat purring.

With respect to human appreciation of animal music, one story is quite remarkable. In 1984 bioacoustics researcher Katy Payne was observing elephants housed in the Oregon Zoo in Portland. She had often accompanied her then husband Roger Payne, a prominent whale researcher, on boating trips following whales. (Whale song, as has been widely documented,¹⁰ extends beyond the range of human hearing. Much of it is below our sonic register and must be shifted up several octaves for us to hear.) While visiting the elephants, Payne noticed sensations in her body that she typically felt around whales. She had microphones and recording equipment brought in, and over several days recorded the elephants. When the recordings were analyzed and sped up by a factor of three, a whole new register of elephant song was revealed. Payne had discovered, by bodily appreciation, a song inaudible to humans. In 1999 she would establish the Elephant Listening Project at Cornell University to study these songs.¹¹

The discovery and appreciation of infrasonic elephant song reveals the importance of attending to our bodies when we think about the connections between humans and animals. There are both commonalities and differences in how humans and animals experience the world. There are also commonalities in how they connect to the world and to each other through their bodies. Humans and animals are listening to each other and

¹⁰ D.A. Helweg, A.S. Frankel, J.R. Mobley, Jr., and L.M. Herman, "Humpback Whale Song: Our Current Understanding," in *Marine Mammal Sensory Systems*, ed. J.A. Thomas et al. (New York: Plenum Press, 1992), 459-83.

¹¹ *About The Elephant Listening Project* (Cornell University), www.birds.cornell.edu/brp/elephant/about/about.html, accessed February 8, 2015.

are paying attention to the possibility that the sounds they make are good to listen to; they are engaged in appreciating each other’s music.

I will now offer two arguments that outline the potential of creating meaning within interspecies music appreciation. These arguments are based on the shared reality of human and non-human animal bodies and language. Philosopher of religion Edith Wyschogrod could be speaking about Katy Payne in suggesting that “the body acts as a signifier, as a carnal general that condenses and channels meaning, a signifier that expresses extremes of love, compassion and generosity. In their disclosure of what is morally possible, saintly bodies ‘fill’ the discursive plane of ethics.”¹² Our bodies are capable of engaging our environments beyond our ability to see, to say, or even—if our attention and imagination are big enough—to hear. The disposition of our bodies has no need of language in order to signify meaning. A body can connect to, draw attention to, and signify meaning to another body. Payne could appreciate the music of infrasonic elephant song by trusting her body to be open to the possibility of a song that she could not hear with her ears.

How does this claim of shared reality relate to other animals? The domestic cat has evolved an incredibly large hearing range with strengths in both low and high frequency sound. Given the size of my cat Neko’s ears, it is surprising that she can hear my voice at all. We are accustomed to the excellent hearing of dogs, but cats, possessing one of the broadest hearing ranges in mammals, can hear both below and above the hearing of dogs.¹³ These examples do not reveal musical appreciation per se, but they do imply an openness to sound that extends beyond our expectation of what is possible. In theology, the capacity to experience is an important precursor to the assignment of meaning. Humans and animals are surprisingly open to each other’s voices.

Snowball’s reception of the Backstreet Boys is certainly appreciation. The band may have made music to gain money, fame, and adoration, but just as certainly to make one move, as the bird moves when hearing it. While the cultural value of the Backstreet Boys’ oeuvre may not be musically significant,

¹² Edith Wyschogrod, *Saints and Postmodernism: Revisioning Moral Philosophy* (Chicago: Univ. of Chicago Press, 1990), 52.

¹³ Rickye S. Heffner and Henry E. Heffner, “Hearing Range of the Domestic Cat,” *Hearing Research* 19, no. 1 (1985): 85-88.

Snowball's appreciation of it has reshaped the relationship between humans and cockatoos and other creatures capable of mimicry. Similarly, we do not know everything that is happening when elephants sing below our range of hearing, but when Katy Payne appreciated their music, it dramatically reshaped the contours of the elephant-human relationship.

What does it mean, finally, to imagine harmony between humans and animals? I suggest that music can be a fruitful training ground for both, a context for the development of peace and community, a way of offering ourselves to the other. We can already see this in domesticated environments and in the sharpened attention of humans to wild environments. A theology of interspecies musical appreciation sees this beginning as having potential for a greater harmony to follow.

An approach to the connection between sound and land need not be mediated solely by human language or consciousness. Music is communication, and the harmony that we find in it resonates while seeking the voice of the other. Music moves beyond language; thus, within music we need not resonate only with our own human language and categories, and we can move towards that which we successfully share. I do not intend here to contrast language with nature, the land, animals, or humans. Indeed, animals have highly sophisticated communication processes. However, human language has not necessarily been the most fruitful mode of engagement for animals and humans. Language is a politicized and partial approach to the world. Sound, by contrast, is "the blood between me and you." My hope is that in music we might find a new, many-parted harmony for attending to the other and for allowing the other to attend to us.

Granted, we can never access another creature's interiority. In regard to human music appreciation, if I ask you to listen to Wild Flag, you may choose to report appreciation to me in order to preserve our friendship rather than to express a genuine love for the band. In regard to interspecies music appreciation, I may never know whether Neko appreciates my wife's voice. However, everything about the personality of both my wife and my cat suggests that in their nightly ritual they do seek closer communion. The sonic harmony that they achieve by singing and meowing to each other can only be described as cataphonic (pun intended), but the personal harmony

that I see when Neko lies down on top of Susan and purrs at the volume of a small jet is undeniable.

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“Let Earth Rest”: A Consumption Sabbath Tent Revival Meeting to Inspire Simplicity and Environmental Action

Joanne M. Moyer

On Sunday, April 22, 2012, a group gathered in Winnipeg to celebrate Earth Day and engage issues of over-consumption and climate change from a Christian perspective. They formed a procession behind a gold-painted oil barrel. Many held signs proclaiming “Love Creation as yourself,” “Earth belongs to God,” “Reduce, Reuse, Repent,” and “Let Earth Rest.” As they walked, they sang “Heal the Earth, while we run this race” and “The Earth is crying out in pain, let my people go.” The procession gathered under a tent near the provincial legislature to hold a worship service in the style of a tent revival meeting. The main message was delivered by evangelist “Brother Aiden John” (Aiden Enns, editor of *Geez* magazine). He spoke of the loss of connectedness in the post-industrial, capitalist, consumer age, and called his listeners to embrace Sabbath rest. In response to the message, participants were invited to sign a Sabbath pledge and tape it to the oil barrel.

Faith and Sustainability

This Consumption Sabbath Tent Revival Meeting (CSTRM) exemplifies an alternative approach to environmental education and calls to action that moves beyond highly rational, fact-based discourse, and works to present a holistic message combining empirical knowledge with emotion, intuition, creativity, and spirituality.¹ Both the faith basis and the artistic worship aspects of the event facilitated this holistic approach.

Literature from the environmental and sustainable development fields suggests some potential strengths within faith-based approaches for addressing sustainability dilemmas. These include organization and

¹ David W. Orr, *Earth in Mind: On Education, Environment, and the Human Prospect* (Washington, DC: Island Press, 2004), 31; Stephen Sterling, “Learning for Resilience, or the Resilient Learner? Towards a Necessary Paradigm of Sustainable Education,” *Environmental Education Research* 16 (2010): 511-28.

infrastructure, rootedness in communities, the ability to provide moral leadership, and a rich pool of educational resources, shared language, and rituals, such as music and singing together.² Through these resources, faith-based approaches can inspire individual and social behavior change by linking beliefs and values to practical action, providing positive alternatives to dominant worldviews, and inserting an element of hopefulness derived from a faith commitment and a commitment to action as a practice of faithfulness.³ Given the urgency of the environmental crisis and the shortcomings of scientific and political responses,⁴ there is merit in considering the potential of faith-based approaches, particularly those employing worship, music, and other activities that tap into human dimensions beyond the cognitive.

While empirical studies are increasing, experiential evidence that these approaches can make a contribution is still lacking. Accordingly, in this paper I endeavor to explore how the CSTRM exemplifies the suggested strengths of such approaches, considering themes arising from the Winnipeg event as well as the impact of holistic learning experiences like those enabled through music, dramatic arts, and worship.

Methods, Themes, Patterns

Data were collected through direct observation from my participation in the event, as well as from media reports and blogs, pledge cards, and e-mail questionnaires. The latter were sent to the planning committee and participants whose contact information was included on the pledge cards. Six planners and twenty-one participants responded. Data were analyzed

² Julia Berger, “Religious Nongovernmental Organizations: An Exploratory Analysis,” *Voluntas* 14 (2003): 15-39; Gary Gardner, *Invoking the Spirit: Religion and Spirituality in the Quest for a Sustainable World* (Washington, DC: Worldwatch Institute, 2002), 11; Roger S. Gottlieb, *A Greener Faith: Religious Environmentalism and Our Planet’s Future* (Oxford: Oxford Univ. Press, 2009), 11.

³ Roger S. Gottlieb, “You Gonna Be Here Long? Religion and Sustainability,” *Worldviews* 12 (2008): 163-78; Gregory E. Hitzhusen, “Going Green and Renewing Life: Environmental Education in Faith Communities,” *New Directions for Adult and Continuing Education* 133 (2012): 35-44; Laurel Kearns, “Noah’s Ark Goes to Washington: A Profile of Evangelical Environmentalism,” *Social Compass* 44 (1997): 349-66.

⁴ Mark Hathaway and Leonardo Boff, *The Tao of Liberation: Exploring the Ecology of Transformation* (Maryknoll, NY: Orbis Books, 2009).

using NVivo software to organize the material, and to identify themes and patterns that constitute the ensuing discussion.

Community

The CSTRM planning process was rooted within the Mennonite community in Winnipeg, evolving from an adult education class at Charleswood Mennonite Church (CMC). The inter-church, ecumenical planning committee, sponsored by CMC and *Geez* magazine, relied heavily on congregational communication networks to advertise the event, which was promoted in the announcements of at least six churches. This is how the majority of participants heard about it.

In addition to using resources within their communities, several of the planners also described a desire to create community, as in this example:

I was hoping to animate and inspire a segment of the population that might feel burdened by the state of the environment. I was hoping to foster a sense of community among spiritually-inclined eco-activists, and equip them with small and large steps they could take in creating a more environmentally sustainable urban lifestyle.⁵

Community was a dominant theme for CSTRM participants who enjoyed meeting friends and derived significant encouragement from participating in an event with like-minded people:

I think the best part for me was just being reassured that there are others [for whom] creation care is a big concern, and that we can support each other.⁶

The event gave me courage that my small efforts, when joined to others', were worth it.⁷

Thus, the community provided support, encouragement, and inspiration, becoming an arena for accountability and admonition. For Participant 77, the event served as “good peer pressure, in the best sense, like, all my friends were doing it.” It was also:

⁵ Planner 002

⁶ Participant 87

⁷ Participant 121

[A] time of admonition—especially our addiction to oil. . . . This event was an encouragement to try harder and to remember that our existence is tied to the care of our environment. I can’t point to any particular thing that I changed because of this event, but like going to church or participating in a devotional each day it is/was a reminder to act on our best intentions.⁸

Congregational singing was part of community-building in CSTRM, further reinforcing a sense of connectedness among participants, as singing together is an important communal activity for many Mennonites.⁹ Building on these elements, CSTRM demonstrates the role Christian community can play in facilitating resistance to consumer culture, as expressed by Jesuit scholar John F. Kavanaugh: “a Christian, in the face of our culture’s dwarfing and isolating of the individual, must turn to a community of shared life-experience which both fosters committed faith and enables the individual to criticize and challenge the programming of culture.”¹⁰

Theological and Prophetic Traditions

Communities of faith are rooted in rich cultural and theological traditions offering moral principles and values, standards for behavior and action, and cultural critiques that can inspire, guide, and support individual and social action.¹¹ Within a larger framework of seeking justice for people and the land, CSTRM planners built on two counter-cultural theological streams: simplicity and Sabbath-keeping.

Historically, the Mennonite commitment to simplicity derives from a belief that Christians’ primary allegiance is to the Kingdom of God, not the pursuit of wealth and power.¹² The planners’ intention was to address what journalist Aaron Epp describes as “the over-consumptive lifestyle of the average North American,”¹³ in particular, the consumption of oil:

⁸ Participant 129

⁹ Maureen Epp and Carol Ann Weaver, eds., *Sound in the Land: Essays on Mennonites and Music* (Kitchener, ON: Pandora Press, 2005).

¹⁰ John F. Kavanaugh, *Following Christ in a Consumer Society: The Spirituality of Cultural Resistance* (Maryknoll, NY: Orbis Books, 1991), 132.

¹¹ Gottlieb, *A Greener Faith*, 12.

¹² Travis Kroeker, “Rich Mennonites in an Age of Mammon: Is a Messianic Political Economy Possible?” *Journal of Mennonite Studies* 27 (2009): 167-78.

¹³ Aaron Epp, “Nothing Old Fashioned about Earth Day ‘Revival Meeting,’” *Christian Week*,

I was hoping we could come up with some powerful and effective symbols for our commitment to reduce our consumption; also, to get a message out to the larger Christian community about anti-consumerism being something Christians should do.¹⁴

This message was both heard and remembered by participants. Participant 93 described the event as a “sincere lament of our participation in over-consumption,” while Participant 119 commented that

[T]here was this sense that living a slower pace lifestyle—being more intentional about how we use the earth’s resources—is not only about saying no to conveniences, it’s also about saying yes to a vibrant simplified life where less really is more.

Through the second theme, Sabbath-keeping, CSTRM planners provided a positive alternative to the culture of consumption. In planning the event, they made direct links between consumption and the need to appreciate God’s gifts and to relinquish society’s addictive dependence on excess:

We chose the consumption Sabbath theme to encapsulate the imbalanced relationship between humanity and the earth.¹⁵

The way that we continue in consumer culture is to get as much as we possibly can out of nature and the land for ourselves. . . . But God requires us to do what’s necessary for the land and creation to also have rest and recuperate from the damage that we’ve done.¹⁶

The planners relied on several contemporary thinkers to shape their ideas. Borrowing from Ched Myers,¹⁷ Enns preached about the “three Rs” of Sabbath living: 1) recognize the abundant gifts of creation; 2) restrain ourselves as an expression of gratitude; and 3) redistribute the gift to those

April 23, 2012, www.christianweek.org/stories.php?id=1968, accessed September 17, 2013.

¹⁴ Planner 005

¹⁵ Will Braun, “Earth Day Revival Amuses and Transforms: Reduce, Reuse, Repent,” *Huffington Post*, April 26, 2012, www.huffingtonpost.com/will-braun/earth-day-revival_b_1454477.html, accessed August 12, 2013.

¹⁶ Quoted in Epp, “Nothing Old Fashioned about Earth Day ‘Revival Meeting.’”

¹⁷ Ched Myers, *The Biblical Vision of Sabbath Economics* (Washington, DC: Tell the Word, 2001).

in need. Inspiration was also drawn from Ric Hudgens,¹⁸ who highlights biblical warnings that God will enforce Sabbath rest if necessary (e.g., Leviticus 26:34-39). Hudgens sees contemporary parallels in this warning, particularly in the context of globalization and climate change, but like CSTRM planners, he draws hope from Sabbath principles as a “spiritual weapon” for the impending struggle. A CSTRM blogger summarized the hopeful message that Sabbath principles provide:

A consumption Sabbath is an opportunity to worship God by releasing ourselves from the grip of over-consumption and entering a cycle of growth in which we seek healthy relationships with what gives us life. By this we may enter into the freedom and salvation of God’s grace and blessing.¹⁹

Through traditional Christian theological themes, event planners found spoken and sung language and symbols that resonated with their audience, providing key resources that bequeath faith communities with the ability to provide moral leadership, educate and transform their adherents, and inspire action.²⁰ Worship traditions contain various rituals that can fulfill these functions.

Worship

In adopting the style of a tent revival meeting, CSTRM planners chose a particular form of worship with attendant language, music, and rituals that were generally familiar to their participants. Components of a “traditional” revival meeting included a tent, a gospel choir leading congregational singing, testimonials, a revivalist preacher, and an altar call (i.e., Sabbath pledges). The form was presented in a lighthearted, tongue-in-cheek manner that was part worship, part performance. In taking this approach, planners sought to add levity to a serious topic, using experiential and holistic methods to fully engage those involved:

¹⁸ Ric Hudgens, “The Land Will Have Its Rest,” *Jesus Radicals*, January 30, 2012, www.jesusradicals.com/the-land-will-have-its-rest, accessed January 14, 2014.

¹⁹ Tara Forshaw, “Consumption Sabbath,” *The Salvation Army Ethics Centre* [Winnipeg] blog (May 8, 2012), www.salvationarmyethics.org/featured/consumption-sabbath, accessed June 20, 2013.

²⁰ Gottlieb, *A Greener Faith*, 11-13; Hitzhusen, “Going Green and Renewing Life,” 35-44.

As organizers, our wish was to combine performance art, sincere faith and concern for the earth. . . . Our aim was not to parody the revival genre so much as to re-purpose it. So instead of toning down the religious stridency, as is the impulse of our age, Brother Aiden John revved it right up, but with a postmodern spin and plenty of self-referential humor.²¹

I hoped that the event would infuse fresh energy into people's engagement on enviro issues and allow for ritualistic processing of feelings of guilt, hopelessness and being overwhelmed. . . . For me it was also an experiment in combining faith and environmental issues in a way that was meaningful but not overbearingly earnest.²²

The success of this experiment was mixed, though positive responses were more numerous than criticisms. Positive comments were effusive:

It was exciting and abounding in creativity. I loved the subversive use of the gospel tent meeting style.²³

I was moved by the experience and feel that those organizing and leading the service put a lot of thought into the use of the tent revival format. The tent revival format allowed for some playfulness in the worship and was carried out with lots of enthusiasm and energy, while still allowing for the truth of our involvement in the destruction of creation and our lament of this to rise out of our worship.²⁴

Others found the satirical tone of the service and the style of the speaker difficult to engage with as a spiritual experience:

The service was fun, but felt a little contrived; the jumble of 'worship' and lampooning didn't quite work for me as a spiritual experience.²⁵

²¹ Braun, "Earth Day Revival Amuses and Transforms."

²² Planner 001

²³ Participant 77

²⁴ Participant 88

²⁵ Participant 101

The worship service was confusing . . . was it meant to be worship? Or was it poking fun at a form of worship that some have found meaningful?²⁶

These responses to CSTRM demonstrate that employment of religious ritual can be powerful but also risky, because people respond differently to symbols and rituals. The untraditional aspects of the event received the most ambivalent or negative responses, but despite some disconnection from the worship style, most respondents still derived enjoyment and inspiration from the event.

Hope and Joy

Given the gravity of the environmental crisis, many environmental initiatives are pervaded by a spirit of fear, guilt, and despair. However, messages of doom and gloom are poor motivators for transformation and action, particularly when confronting social, economic, and political forces that appear insurmountable.²⁷ Providing a sense of hope and joy within this context is one of the greatest gifts faith-based initiatives can offer the environmental movement.²⁸ In describing their impressions of CSTRM, participants wrote broadly about their pleasure derived from the celebratory and playful atmosphere, the passion and energy displayed, the music, and the fun of worshipping outside:

Overall, the event seemed to have a celebratory feel to it—as if we were saying that living in harmony with nature can be a joyous act.²⁹

I was glad to see that some Christians were highlighting this very complex topic in a way that was festive.³⁰

Some participants noted that the event elicited feelings of guilt,

²⁶ Participant 102

²⁷ Gottlieb, *A Greener Faith*, 198.

²⁸ See, for example, Robert Booth Fowler, *The Greening of Protestant Thought* (Chapel Hill: Univ. of North Carolina Press, 1995), 20; Gottlieb, “You Gonna Be Here Long?” 163-78.

²⁹ Participant 119

³⁰ Participant 127

particularly with respect to failed pledges, but others experienced a lifting of guilt and obligation, and a transition to inspiration and joyful challenge:

I personally felt guilty for a long time about not knowing how to do better. . . .The Consumption Sabbath further relieved those residual guilt feelings, because the sense was so much one of thanking God for the gift of creation and experiencing that. That's a far better place out of which to come to our good behaviors.³¹

Hopeful. To be given encouragement to continue, and to aim to care for creation with more joy and love and perhaps less obligation.³²

Thus, CSTRM engaged difficult and complex issues in a playful, carnival-like atmosphere that largely inspired its participants. In the face of climate change, however, simply feeling inspired is not sufficient.

Inspiring Action

Participant pledges reveal how well the CSTRM's message may translate into action. Of 300 participants, 129 signed pledge cards. Many people pledged to do more than one thing, resulting in a total 206 separate pledge activities (Table 1). The number of pledges made, and the commitment evident in their wording, indicate that feelings of inspiration translated at the very least into an intention to act.

³¹ Participant 128

³² Participant 93

Table 1
Participant Pledges (Major Categories)

Pledge Category	Percent by Participant	Examples
Food	44	Gardening, local food, vegetarian, organic, fair trade, canning skills, less processed and packaged food
Transportation	36	Cycling, public transit, walking, reduce motorized transport, flying
Money and materials	22	Reduce paper, reusable beverage containers, clothing choices, consider money use and purchases, give more
Digital/screens	20	Less internet, computer, television, phone, read more

In the questionnaires, over half of the respondents described acting on their pledges in some way:

This summer I have been working 12 km [7.5 miles] away from where I live and I have worked my way up to cycling every day of the week, most weeks, which is a lot more cycling than I have ever done before.³³

Post CS event I have tried to be even more careful about not driving unnecessarily. I have used my bike even more often. I have tried not to consume as much and have looked for more creative ways to reduce garbage and waste and recycle more.³⁴

One woman, who pledged to use more local products and produce, formed a food-canning group at her church that has picked or purchased locally grown fruit and vegetables, and canned jam, tomatoes, and salsa. Conversely, a minority of respondents expressed dissatisfaction with their pledge action:

I have to admit that I am still on the computer way too much. I did try for a while to cut down on my time, but I am weak.³⁵

³³ Participant 88

³⁴ Participant 113

³⁵ Participant 105

And a few expressed continuing intentions for future action, as in this case:

We still dream of a day when we will not drive our car.³⁶

Based on participant responses, the act of writing and attempting to fulfill a pledge appears to have been a meaningful exercise that gave practical expression to the message conveyed in the CSTRM and resulted in some concrete action at both the personal and community level.

Conclusion

Participant responses to CSTRM suggest that certain aspects of the faith-based approach strengthened the event's impact. While questionnaire respondents did not engage musical components at length, it is important to emphasize the role of music and other performance arts in environmental education and activism. Philosopher James Smith argues that our behavior is driven by our fundamental desires, formed by significant, meaningful practices that shape our identity, like worship.³⁷ In Christian settings, music constitutes a key component of worship and can shape human desires in particular ways.

First, music is a holistic learning experience. While much academic learning focuses on cognitive processes, music involves the whole body, including cognition, imagination, and emotion.³⁸ The impact of whole body experiences was apparent in the strong responses evoked among participants by the CSTRM parade and worshipping outside. Second, music carries the stories and narratives that shape our love and desire,³⁹ as exemplified by the repurposed gospel songs sung during the march. Words like "Gonna lay down my fossil fuel, ain't gonna study oil no more" eloquently summarize the theological and prophetic themes explored in the event. At the same time, performative activities have the capacity to activate emotions and personal taste, which may enhance or impede the reception of a particular message, as demonstrated by varied reactions to the tent meeting style. When successful, the performative nature of music and worship may facilitate the translation

³⁶ Participant 119

³⁷ James K.A. Smith, *Desiring the Kingdom: Worship, Worldview, and Cultural Formation* (Grand Rapids: Baker Academic, 2009), 25.

³⁸ Ibid, 170.

³⁹ Ibid, 172.

of thoughts and ideas into actions because they are communicated by a mode that is itself active.

Finally, in worship, music is made by a group. As a communal exercise that can shape desires, music also subtly connects people to networks of support, solidarity, and accountability. In their responses, CSTRM participants emphasized the importance of community in reminding them of their responsibility to live well on the earth, in admonishing them to strive harder, and in encouraging them by demonstrating that they are not alone on this journey.

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Singing New Stories: Provoking the Decolonization of Mennonite Hymnals

Geraldine Balzer

It is appropriate that the first iteration of this paper was read in the Detweiler Meeting House, just outside Kitchener-Waterloo, Ontario, culturally a very “Mennonite” space in the midst of a larger geographic place, for in many ways this meeting house set on ancient land reflects the tension that I wish to explore. Place is important. In my work with Aboriginal Canadians, I have learned that one must always begin by acknowledging kin and place. Mennonites have been good at the first. My own roots run deep in the ethnic Mennonite world: I am Geraldine, mother of Alina and Kerstin; daughter of John and Alina; descended from Balzers, Bergs, Dürksens, Fröses, Rempels, Wedels . . . and the list goes on. While my cultural roots are deep, my ancestral roots of place have never been allowed to reach into the land and have instead survived multiple transplantings: Saskatchewan, Ukraine and Russia, Prussia, the Netherlands, Liechtenstein, and Switzerland. Who really knows where my ancestors wandered?

But I am not only Geraldine; I am also Numagina, mother to Nipilayok and Nilgak, welcomed into the kinship circles of the Innuinait of Ulukhaktuk and Kugluktuk, and suddenly my story of place has changed. My settler narrative of empty lands, of *terra nullius*, discovered by intrepid explorers, farmed and industrialized by ambitious Europeans, home to the displaced seeking refuge, has become unsettled. Thus I must also acknowledge and honor the historical keepers of this land, those who were here before, those who were “discovered,” those who were displaced. As participants in *Sound in the Land* 2014, we met on traditional lands of the Six Nations; I come from Treaty Six territory and those stories are now also part of my story.

What does this have to do with hymns in three recent collections—*Hymnal: A Worship Book*¹ and its two supplements, *Sing the Journey*² and

¹ *Hymnal: A Worship Book* (Elgin, IL: Brethren Press, 1992).

² *Sing the Journey: Hymnal: A Worship Book, Supplement 1* (Waterloo, ON: Faith and Life

Sing the Story,³ used by congregations in Mennonite Church Canada and Mennonite Church USA?⁴ The first book is a hymnal employed widely since its publication in 1992, while the latter two supplements are seen as a “continuation” of it (see page iii of *Sing the Story*) and offer new hymns relating to both the liturgical seasons of the church and to 21st-century social and cultural issues.⁵ Consequently, the songs selected for these books offer an implicit story of how one group of North American Mennonites views its faith journey. I am curious about the stories we choose to tell and those we ignore. Whose stories are they? Where were they born and nurtured? How have they changed over time? As Thomas King says, “The truth about stories is that that’s all we are,”⁶ and this article thus asks how these three books tell a Mennonite story.

North American Mennonites have taken seriously the call to love kindness and do justice, working in many international settings to engage theologically and to participate in relief work through medical and social assistance. Participants have often returned with music, foods, and sensibilities that are new to their home communities. As well, membership of the North American churches has become increasingly diverse and multilingual, extending well beyond the traditional Swiss and Russian Mennonite roots, necessitating the inclusion of world music in the hymnal trilogy. However, I want to problematize this inclusion of songs from around the globe in a North American context by asking several questions: Does the pursuit and inclusion of global music reflect the current diversity of Mennonite churches? Does this inclusivity enrich the musical environment

Resources, 2005).

³ *Sing the Story: Hymnal: A Worship Book, Supplement 2* (Waterloo, ON: Faith and Life Resources, 2007).

⁴ *Hymnal* was a joint project of Church of the Brethren, the General Conference Mennonite Church, and the Mennonite Church. The latter two denominations, which include churches in Canada and the US, have been integrated and reorganized as Mennonite Church Canada and Mennonite Church USA.

⁵ “Hymnals are comprehensive congregational resources encompassing liturgical seasons and ordinances/sacraments, while supplements frequently include contemporary western hymns, and/or musics reflecting cultural diversities” (Doreen Klassen e-mail, February 3, 2015).

⁶ Thomas King, *The Truth About Stories: A Native Narrative* (Toronto: House of Anansi Press, 2003), 2.

of these churches? And, perhaps most importantly: Have North American Mennonites, by drawing on the music of other places, forgotten to listen to *this* place?

It is impossible to answer these questions conclusively within the constraints of this paper, and perhaps they are not answerable at all. Still, I challenge us to think of the story these music choices tell. The diversity of music in the hymnal and the supplements draws on the music of other places and connects congregations using these materials to congregations in those places. My intent is not to undermine the importance of those connections but to consider how music connects to a deeper sense of a specific geographical environment. What might music of this geographic place be? Just as Jamaican poet Edward Kamau Brathwaite advocated new literary forms because the hurricane does not roar in pentameter,⁷ I wonder if we need new musical forms that are more at home in our forest cathedrals, arctic wilds, massive lakes, and diverse urban landscapes.

For the purpose of these wonderings, I have chosen the term *place* rather than *environment*. “Place,” as defined by David Gruenwald, “foregrounds a narrative of local and regional politics that is attuned to the particularities of where people actually live, and that is connected to the global development trends that impact local places.”⁸ Does the Mennonite musical canon contained in the three hymnals connect to local and regional politics, the politics of colonialism, and the increasing concern with decolonization? The Sound in the Land 2014 conference call for submissions included a category for “songs of place,” inviting composers “to pay close attention to your own local ecological reality, wherever you are, and write songs in a folk/acoustic/roots-oriented vein that are rooted in that particular place. These are not generic ‘save the planet’ songs—they may be songs that celebrate, or lament, or paint a picture, or tell a story of something that is going on in your own ecological ‘backyard.’”⁹ As I consider “songs of place,” I advocate extending the folk/acoustic roots traditions to include the development of new musical

⁷ Edward Kamau Brathwaite, *History of the Voice: The Development of Nation Language in Anglophone Caribbean Poetry* (London: New Beacon Books, 1984).

⁸ David A. Gruenwald, “The Best of Both Worlds: A Critical Pedagogy of Place,” *Educational Researcher* 32, no. 4 (2003): 3-12, quote on 3.

⁹ “Songs of place” is Mennofolk director Bryan Moyer Suderman’s concept. See uwaterloo.ca/grebel/sound-land-2014/call-submissions, accessed February 10, 2015.

forms that connect to music in existence before European contact—music that grew out of a close relationship to Turtle Island traditions.¹⁰

I began my quest with a simple consideration of the three hymnbooks in order to determine the geographic origin of the collections, a task less easy than I had hoped. The editors were adept at indicating music from outside North America and Europe, but I found it almost impossible to discover which 19th and 20th-century songs were composed in North America and which in Europe through the notes provided in the texts. I was interested in geographic origins of hymns, both to consider the increasingly inclusive diversity of the hymns in the collections and to determine if songs rooted in North America were represented.

The lack of differentiation between European and North American compositions, when interpreted through a lens of postcolonial theory, underlines the centrality of these songs to this canon of Mennonite hymns, as compared to the exotic otherness of those whose non-western countries of origin are explicitly specified. “Margin” and “center” are easily identified within the hymnals. Hymnals function as a canon, and collections are the shared repertoire of a broad group of people as decided by a representative committee. It would be surprising if the core of the canon were not drawn from historic tradition and memory.

A quick summary of my findings reveals that *Hymnal: A Worship Book*, a 1992 collection of more than 600 hymns, identifies 17 as American folk music, 14 as African American, 3 as Plains Indian, and 19 from other countries of origin, predominantly from the Asian and African continents. *Sing the Journey*, a 2005 collection of approximately 100 hymns, identifies 3 as American folk, 6 as African American, and 17 from other countries of origin, expanded from *Hymnal: A Worship Book* to include the Caribbean and Central and South America. *Sing the Story*, from 2007, follows a similar pattern, identifying 2 American folk songs, 6 African American, and 13 from countries of origin similar to those in *Sing the Journey*. From this cursory count, world music, generally music of the Global South, has clearly become part of the canon. More than ten percent of the latter two collections is music from outside the European tradition.¹¹ Interestingly, American folk songs

¹⁰ Turtle Island is the name for North America in several Aboriginal traditions.

¹¹ European traditions focus on European culture and history, including Western song

are differentiated as “other.”

As a post-colonialist, I am interested in voices that are not heard. Why do songs of the Aboriginal peoples of this continent appear only in the first collection? The three First Nation songs included in *Hymnal: A Worship Book* appear with the permission of the Mennonite Indian Leaders Council or the South Dakota Conference, United Church of Christ.¹² These permissions reflect the authenticity of the hymns and the ongoing dialogue with the source communities. However, the question remains: Why are songs from these traditions not included in the second two collections? Anna Janacek, in her study of hymns chosen from *Hymnal: A Worship Book* in six Ontario congregations, noted that “by far the most under-utilized group of hymns were those which originated with Native North Americans.”¹³

That all three collections are dominated by music of European traditions is not surprising. Immigration to North America was precipitated by a search for opportunity and adventure or by the result of persecution and war, traumatic events resulting in exile and nostalgia for homes lost. Edward Said describes exile as “the unhealable rift forced between a human being and a native place, between the self and its true home: its essential sadness can never be surmounted. . . . The achievements of exile are permanently undermined by the loss of something left behind forever.”¹⁴ Song, one thing that did not have to be left behind, became part of the cultural narrative. Over time, as reflected through these collections, four-part harmony, a cappella singing, and the claiming of “606”¹⁵ as a Mennonite anthem left little space for music of this place in creating a new historical narrative. Said suggests

traditions.

¹² *Hymnal: A Worship Book*, 863.

¹³ Anna Janacek, “Gutierrez is a Mennonite Name,” in *Sound in the Land: Essays on Mennonite Music*, ed. Maureen Epp and Carol Ann Weaver (Kitchener: Pandora Press, 2005), 193.

¹⁴ Edward Said, “Reflections on Exile,” in ed. Russell Ferguson et al., *Out There: Marginalization and Contemporary Culture* (New York: The New Museum of Contemporary Art; Cambridge, MA: MIT Press, 1990), 357.

¹⁵ “Invigorating, polyphonic ‘Praise God from Whom all Blessings Flow’ – # 606 in *The Mennonite Hymnal* (Scottsdale, PA: Herald Press, 1969) – from the 1830 Boston Handel and Haydn Society Collection, appeared in Joseph Funk’s first shaped note, four-part *Harmonia Sacra* [songbook] (Winchester, VA, 1832). On January 1, 1964, Mary Oyer and other hymnal editors heard this song in Virginia and included it in *The Mennonite Hymnal*. It became a North American Mennonite anthem” (Carol Ann Weaver e-mail, February 5, 2015).

that histories “selectively strung together in a narrative form” will have their founding fathers [sic], their basic, quasi-religious texts, their rhetoric of belonging, their historical and geographical landmarks, their official enemies and heroes. The collective ethos forms what Pierre Bourdieu, the French sociologist, calls the *habitus*, the coherent amalgam of practices linking habit with inhabitation.¹⁶

Have Mennonites used song as quasi-religious texts, using hymns as a rhetoric of belonging that marks them as insiders rather than settler invaders? Are North American Mennonites, by retaining the musical traditions of Europe and incorporating music born in other places, limiting their potential to connect to local environments through developing music of place? The existing hymn collections are a part of the narrative of Anabaptism, a history marked by nonconformity and separatism from the world that grew out of an historic context. As that context shifts, the narrative also shifts with the increased inclusion of music from the Global South. As North American Mennonites become increasingly aware of the issues of colonialism and the devastating impact of events related to Aboriginal residential schools, the narrative will continue to evolve.

The hymns selected for *Hymnal: A Worship Book* and its two supplements augment and become the basis for the North American Mennonite soundpool. Mennonite hymnologist Mary Oyer defines ‘soundpool’ as “music that is familiar, often repeated, nourishing, invigorating.”¹⁷ This soundpool becomes part of the rhetoric of belonging, the story Mennonites have chosen to tell. Anna Groff’s analysis of the use of “606” illustrates how song has become a marker for those who belong and thus can serve to marginalize others. Quoting Oyer, who describes the song as “a great thing for people in the Euro-American world,” and Rebecca Slough, who found that it is “the anthem for white, Anglo, educated Mennonites with Western European roots,”¹⁸ Groff clearly identifies the problem. While “606” is iconic, the way the sound pool becomes *canon* may

¹⁶ Said, “Reflections on Exile,” 259.

¹⁷ Anna Groff, “606: When, Why and How do Mennonites Use the Anthem?” *The Mennonite*, March 18, 2008, 14-15.

¹⁸ Ibid.

reinforce the insider-outsider status. The gradual incursion of global music has the potential to interrupt this narrative but does not necessarily do so. At its best, the expanded canon creates a welcome space for new voices.

Within this cultural narrative there is space for the music of Latin and South America and Africa, previously called “the exotic other” and unfortunately defined as distantly representative of the Mennonite World Conference. But now, due to the increasing diversity of the global Mennonite church, this moniker no longer applies. When singing songs from Latin and South America and Africa, North American Mennonites are relieved, if temporarily, of their role as colonizers and settler invaders, and can see themselves as part of the global collective, inclusive and open to difference. Considering music originating in places other than North America forces them to recognize their complicity in the colonizing venture, the fact that the land they farmed was not *terra nullius*.

Victoria Freeman, in *Distant Freedom: How My Ancestors Colonized America*, considers how family memories are lost: “I have come to realize how much immigrants lose of their family memory because it is tied to physical places—to houses, farms, towns, landmarks, battlefields, and graves.”¹⁹ As a result, histories need to be reconstructed, as she further explains: “In the case of the colonization of North America, two kinds of memory, or rather non-memory—that of the family and that of the state—reinforce one another in suppressing our knowledge of our history with Aboriginal people.”²⁰ My personal experiences as a 14-year resident and member of Inuit communities forced me to acknowledge this suppression, and recent events in Canada such as the Truth and Reconciliation Commission hearings into residential schools²¹ and the Idle No More movement²² have, I hope, caused all Canadians to reconstruct their national narratives.

What does this mean for Mennonite hymns? I believe a critical sense of pedagogy is needed that, in the words of Peter McLaren and Henry

¹⁹ Victoria Freeman, *Distant Relations: How My Ancestors Colonized North America* (Toronto: McClelland and Stewart, 2000).

²⁰ Ibid, xvii.

²¹ Canada’s 2013 Truth and Reconciliation Commission is detailed at www.trc.ca.

²² This 2012 protest about Aboriginal resources spread across Canada and beyond: www.cbc.ca/news/aboriginal/idle-no-more-where-is-the-movement-2-years-later-1, accessed February 11, 2015.

Giroux, “must address the specificities of experiences, problems, languages and histories that communities rely upon to construct a narrative of identity and possible transformation.”²³ This transformation can happen only if communities move from being residents of this space to being inhabitants of it. David Orr, as cited in Gruenwald, elaborates a bioregionalist meaning of living well in place by drawing a distinction between inhabiting and residing:

A resident is a temporary occupant, putting down few roots and investing little, knowing little, and perhaps caring little for the immediate locale beyond its ability to gratify. . . . The inhabitant, in contrast, “dwells” . . . in an intimate, organic, and mutually nurturing relationship with place. Good inhabitation is an art requiring detailed knowledge of a place, the capacity for observation, and a sense of care and rootedness.²⁴

By dwelling in this place, by not seeing it as a temporary stop on the journey between places on earth or between heaven and earth, individuals and communities can learn to listen to the land and the stories that it holds. Composing and singing music that reflects those stories could and should be part of this journey, and could be one way to participate in the decolonization and re-inhabitation of this place. By learning to live well socially and ecologically in places that have been disrupted and injured through the colonization process, we can recognize and attempt to address these issues.²⁵

Gruenwald contends that re-inhabitation requires us to “identify, recover, and create material spaces and places that teach us how to live well in our total environments,” while decolonization requires us to “identify and change ways of thinking that injure and exploit other people and places.”²⁶ Mennonite involvement in the Truth and Reconciliation Commission and the building of relationships with the Aboriginal peoples of Canada indicate that the process of decolonization has begun. As communities involving both Mennonites and Aboriginal peoples identify and work toward changing ways

²³ Peter L. McLaren and Henry A. Giroux, “Critical Pedagogy and Rural Education: A Challenge from Poland,” *Peabody Journal of Education* 67, no. 4 (1990): 154-65.

²⁴ Gruenwald, “The Best of Both Worlds,” 9.

²⁵ Ibid.

²⁶ Ibid.

of thinking that have injured and exploited the peoples of this place, further reconciliation can occur. However, learning to re-inhabit and to live well in this place challenges communities to create, to step outside the familiar story and song, and to imagine something different.

Mennonite narratives of song frequently link Euro-American Mennonites to our past, which is important, but must also link us to our present and carry us into our future. We must make room for the skin drums of America just as we have made room for African drums alongside our pianos and organs. Perhaps the echoes of our past have faded sufficiently that we can hear with new ears. One song embodying this shift is Audrey Falk Janzen's choral setting of Jo Cooper's poem, "Ancient Echoes."²⁷ Her composition²⁸ paints a sound picture of wind whispering through the prairie grasses and bison thundering over the plains, evoking sounds of this geographical place. While still grounded in western music traditions, Falk Janzen's collaboration with Cooper, a Métis poet and visual artist, acknowledges the geographic place and the original peoples of the Saskatchewan Plains. Perhaps as North American Mennonites learn to be inhabitants of this place rather than residents of it, we will also listen more closely to our own homeland and create space for music of this place. *Taima*.²⁹

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²⁷ Audrey Falk Janzen and Jo Cooper, "Ancient Echoes," 2005. Available at ictus.ca/wp-content/uploads/2014/08/IctusCatalogue-1.pdf, accessed February 10, 2015.

²⁸ A performance of this work by Rosthern (Saskatchewan) Junior College is found at: www.choirplace.com/videos/5001/ancient-echoes-audrey-falk-janzen, accessed May 23, 2015.

²⁹ "Taima" in the Inuktitut language marks the end of a story. It can also indicate new beginnings. For the musical duo TAIMA, it "represents the actions of a people who take the future into their own hands": plus.google.com/+PaulFrank_paz/posts/E9gGDY2zudD, accessed February 11, 2015.

Blue Green Planet (12.4 Tablature)

earth
 blue green
 planet our home
the loss of it
 loss of all this
and love flown
 hourglass sand
 snow sting sand
 ethiopian sand falling

the death that follows
 death of things
 my death
 yours one hundred
 twenty-seven
 psalms a burning wind
and our lives
 irretrievable irresistible
 angels
the language of angels
 their breath
 the rush of wings

all these wonders
 and lives irresistible
whisper
 of angel wings
 and little
 ringed plover

John Weier, a recent Writer-in-Residence at the University of Winnipeg, is a luthier and a birder. This poem originally appeared in his collection Where Calling Birds Gather (Turnstone Press, 2013) and is reprinted by permission of the publisher.