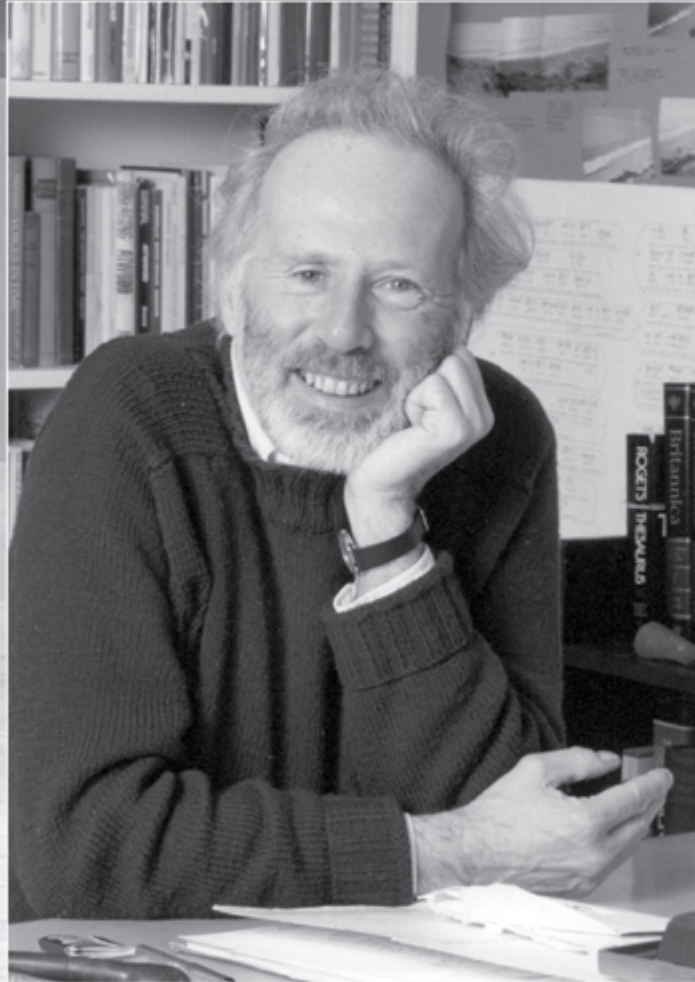


Soundscape

VOLUME 12 NUMBER 1 | WINTER / SPRING 2012-2013



THE GLOBAL COMPOSITION:

Dedicated to R. Murray Schafer on his 80th Birthday (July 18)
Founder of Acoustic Ecology

The Journal of Acoustic Ecology

Soundscape

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Soundscape is an English language publication of the World Forum for Acoustic Ecology (WFAE). It is conceived as a place of communication and discussion about interdisciplinary research and practice in the field of Acoustic Ecology, focussing on the inter-relationship between sound, nature, and society. The publication seeks to balance its content between scholarly writings, research, and an active engagement in current soundscape issues.

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The World Forum for Acoustic Ecology, founded in 1993, is an international association of affiliated organizations and individuals, who share a common concern for the state of the world's soundscapes. Our members represent a multi-disciplinary spectrum of individuals engaged in the study of the social, cultural, and ecological aspects of the sonic environment.

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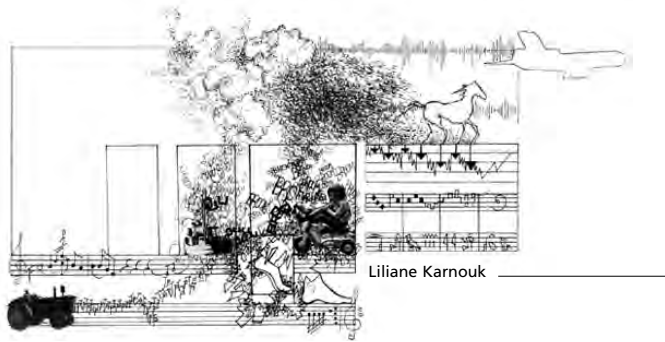
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Submissions. Texts can be submitted for the following sections in the journal: *Feature Articles*; *Current Research*: a section devoted to a summary of current research within the field; *Dialogue*: an opportunity for editorial comment from readers; *Perspectives*: reports of events, conferences, installations etc.; *Sound Journals*: personal reflections on listening to the soundscape; *Soundwalks* from around the world; *Reviews*: of books, CDs, videos, websites, and other media; *Students' and/or Children's Writings*; *Quotes*: sound and listening-related quotations from literature, articles, correspondence, etc.; *Announcements*: of events organized/sponsored by the WFAE Affiliates.
Please send correspondence and submissions to: *Soundscape—The Journal of Acoustic Ecology*, Department of Radio, TV & Digital Media, Southern Illinois University, Carbondale, IL 62901-6609 (c/o Phylis Johnson, Editor). **Email contacts** (please send your email submissions to the relevant address): soundscape-editor@wfae.net, soundscape-news@wfae.net, soundscape-reviews@wfae.net, soundscape-technology@wfae.net.



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Editorial

The Tuning of The Global Composition: Editorial Reflections

By Phylis Johnson (Interim *Soundscape* Editor) & Sabine Breitsameter (Guest Editor)

This issue of *Soundscape: The Global Composition*, arrives at a pivotal time in the history of Acoustic Ecology. This *Soundscape* presents and expounds on research and creative projects that grew out of “The Global Composition: Sound, Media, and the Environment” conference in July 2012.

Sabine Breitsameter being the conference’s initiator, triggered by a grant she received from the Canadian government’s Department of Foreign Affairs, had the honor to co-chair it, with Claudia Söller-Eckert, as well as co-edit the proceedings. As co-author of the 2012 proceedings, and guest editor of this issue, Breitsameter has selected some core pieces. In doing so, she suggests the continued exploration of these issues. Five papers were chosen to be reworked and adapted for this important issue of *Soundscape*. Such articles provoke as many questions as the authors attempt to answer. The global composition, Schafer’s metaphor for the simultaneity of the world’s soundscape, is ever unfolding and evolving. Similarly, the articles selected here present diverse aspects representing at the same time Acoustic Ecology as a mature field of studies as well as one where reflections, positioning and research have been taking place in all parts of the world. The core concepts introduced by R. Murray Schafer at that 2012 conference, and over time through his compositions, publications, lectures, mentorships, and workshops, are applied here in unique and significant ways, in an effort to understand the elaboration of acoustic practice and research. Sound as a field of critical and analytical reflection and debate has long been neglected although always present within the universe. What Schafer developed as fundamental became the basis for a broad theme — namely sound studies and soundscape studies; artists and scholars continue to seek the means to examine, interpret, preserve and compose sound, and to ask for a mentally and physically beneficial sonic environment. The

name of the journal *Soundscape* is core to its undertaking, as well as to the rewards and possibilities ahead if one so chooses to set off for an acoustic journey, exploring auditory paths towards fostering roles, responsibilities and joys as sound scholars, artists and practitioners.

Now one year later, *Soundscape* revisits the issues and concerns raised during the conference. In the first article among this significant collection, Schafer, presents an overview of the field. His work remains essential to understanding what lies ahead. Who better to share sonic reminiscence than he, the originator of Acoustic Ecology? This year, his 80th birthday is pause for celebration and reflection, as he reviews his historical and cultural role as the founder of the World Forum of Acoustic Ecology (WFAE).¹ In his article, he recalls how he proceeded through the murky waters of academia in establishing credibility for what readily slips off the tongue of many today - sound studies. He did so, by bringing people together, educating them, while maintaining his inventive and critical spirit. He notes, “We spent less time pointing our fingers at guilty sounds and began to concentrate on planning soundscapes for the future.” Schafer contemplates the origins of the field, the good and not-so-good; he discusses the long road that he travelled to arrive at this point in his understanding. In the end, his story is a compelling one to tell and be passed on to the next generation.

The next two articles by Keiko Torigoe, “Insights into the Global Composition Taken at Three Stricken Places in Japan,” and Koji Nagahata, “What Should the Soundscape Community Do When Listening to the Soundscapes of Fukushima,” are core to Acoustic Ecology, that being to analyze and observe the change of soundscapes caused by environmental shifts, pollution and disasters. The essays bring, too, local and global perspectives on the value of archiving and appreciating sonic environments that are

often taken for granted. Their research, “The Soundscape Project for Earthquake Disaster on March 11 in Japan,” deals with some difficult issues - how communities might be better prepared sonically for natural disasters, and beyond that how humans contribute to devastation when they fail to think through the delicate environmental balance, in juxtaposition to man-made constructions (i.e., nuclear power plants). One discovers that, unlike Rachel Carson’s *Silent Spring* (1962), humans can be silenced when choosing to make technological weighty decisions without consideration of impact on a fragile, however, stable status quo or concept of nature. At the close, both authors ask their readers to consider, what might be learned from their experience, one that impacts the global composition of which all must participate, in one way or another. Perhaps communities have begun to realize that they, and the soundscapes in which they are immersed, are interwoven, and there are dire consequences and wonderful rewards for being in tune within the world.

Yet, to appreciate the complexities of creating healthy acoustic communities is to tune into the social environment of the city, encompassing everyday culture and entertainment. Anil Çamcı and Koray Erkan bring forth a discussion on the listening culture within Istanbul, with a particular ear towards those social venues that attract and gather people for conversation and music listening (live and recorded). Lo-fi soundscapes permeate modernity; as the authors draw from Schafer’s work, they depict varied scenarios of human tolerance for ambient noise, among other considerations that shape listening in urban areas.

In the next article, the work of Frauke Behrendt, “GPS Sound Walks, Ecotones, and Edge Species; Experiencing Teri Rueb’s Mobile Metaphor” expands the conversation. She proposes, and it is well supported by her research, that there is no point in considering new technologies apart from the environment, and vice versa. Since many decades, artists have been working to look for those spaces upon which humans, media and soundscapes can co-exist and perhaps remix in a unique composition. Behrendt exemplifies this by referring to the quite new technology of mobile media.

In Leah Barclay’s article, “Sonic Ecologies: Exploring the Agency of Soundscapes in Ecological Crisis,” the discussion becomes community-centric through the lead of the sound artist. She writes, “The capacity building community engagement is designed to empower the community to continue working long after the artist has departed.” She continues, later in her discussion, “one of the most powerful means to stimulate this shift in consciousness” is sound, namely and more specifically electroacoustic music.

The sonic environment has significantly changed during the span of Schafer’s life. The technologies with which one records and analyzes, and those devices that are believed to simplify and enrich the quality of life, have also assumed a large and often indispensable role over those 80 years. This issue of *Soundscape* offers readers a glimpse into the Global Composition of the past, present, and

hopefully a way to foresee and especially hear the acoustic future. It is also interesting to note that two affiliate regions of the WFAE, the Hellenic Society of Acoustic Ecology (HSAE) and the Finnish Society of Acoustic Ecology (FSAE) are making efforts to translate two of Schafer’s books - “*The Soundscape: Our Sonic Environment and the Tuning of the World*” and “*A Sound Education*” in Greek and Finnish respectively. In the latter case, the plan would be to distribute the books to elementary schools. It is no coincidence, that one of the most significant European festivals for contemporary music, “Steirischer Herbst” (Graz/Austria), includes in this year’s program, on behalf of the Austrian public radio ORF, a processual event which introduces secondary school students to the concept of soundscape, Acoustic Ecology and soundscape composition.²

It is the hope of the editors and contributors that this *Soundscape* issue advances Acoustic Ecology further, making it an integral and constantly considered part of contemporary society, especially during a time wherein middle-Europe, the everyday quality of the auditory, particularly airport noise, has become a major issue of public debate. May the questions never cease, and neither the quest to find the answers on how better to critically hear the world and to develop further, hopefully improve, the Global Composition. Starting within one’s community, individual and collective efforts will likely reverberate beyond.

Endnotes

1. Sabine Breitsameter and Eric Leonardson, eds., *Ways of Listening, Figures of Thought*. Festschrift for R. Murray Schafer on the Occasion of the 80th Birthday, Dieburg Series on Acoustic Ecology, Darmstadt/Germany 2013, ISBN 978-3-00-042395-6.
2. Check out <http://personal-soundscapes.mur.at/wissen> (25.6.13), in German only.

Acknowledgment

Special thanks to Natascha Rehberg, editorial assistant for this issue of *Soundscape*.

About the Authors

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PAST ISSUES OF SOUNDSCAPE AVAILABLE ONLINE

Adobe Acrobat PDF versions of *Soundscape: the Journal of Acoustic Ecology* are available for download at:
wfae.proscenia.net/journal/index.html

Report from WFAE President

2012 was a year of transitions in the WFAE. I begin by expressing heartfelt thanks and gratitude to Hildegard Westerkamp who retired in April as *Soundscape's* founder and Journal Editorial Committee Chair. Anyone familiar with acoustic ecology, electroacoustic music, soundwalking, the Canadian Association for Sound Ecology, and the WFAE surely appreciates her generous, insightful leadership and artistic accomplishments. Hildegard remains a guiding voice of experience for many of us in the WFAE and its affiliate organizations. I am happy to welcome Phylis Johnson, who takes over in Hildegard's place as Interim Editor-in-Chief for *Soundscape*. Phylis is excited, inspired, and brings promising, forward thinking ideas for the journal's future. She is a member of the American Society for Acoustic Ecology, and Professor with a PhD. in Instructional Technology, teaching in the Department of Radio, Television, and Digital Media at Southern Illinois University. In addition to her wealth of communications experience, Phylis authored two articles in past issues of *Soundscape*, providing her with a working knowledge and respect for the journal's mission. I am also happy to introduce and welcome our two new Vice Presidents, Meri Kytö and Noora Vikman, both from the Finnish Society for Acoustic Ecology. In addition to my own transition in the WFAE Executive, from WFAE Vice President, I have replaced Nigel Frayne who continues his service on the WFAE's Executive Board as Treasurer and Membership Secretary. Nigel's leadership and vision guides me and assures WFAE's future success. With these transitions the WFAE Board structure as mandated in our by-laws was completed. It keeps our forum fresh with new people coming into and moving through the Executive.

In July 2012, the WFAE endorsed *The Global Composition: Conference on Sound, Media, and the Environment* attracted 200 people to the Dieburg campus of the Hochschule Darmstadt. It brought many new people into the fold of acoustic ecology, and posed far-reaching concerns of acoustic ecology within a context of art and science, and the proliferation of interest in soundscape studies and environmental sound emerging in many professional disciplines and cultures of the world. This issue of *Soundscape* features articles selected from the proceedings of the conference by guest editor and conference organizer, Sabine Breitsameter. We believe the value of their subject lies in showing acoustic ecology's capacity for embracing divergent ideas. This indicates a field that is maturing and is enriched

by the heterogeneity of theories and practices—now intensified when it intersects and convolves with the realities of global climate change and the negative impact upon health of all life through the degradation of water quality, habitat loss, and geo-political turmoil.

The theme of "Global Composition" encompassed a range of diverse topics with an emphasis on media education, imagination, and collaboration. This issue of *Soundscape* shows the heterogeneity and diversity of opinions and approaches to soundscape and the open, inclusive approach the WFAE embodies in our organizational structure. True, no single definition or theory satisfies everyone. This may not be a problem but rather an indication that acoustic ecology is still growing, vital, maturing, and able to support a wealth of diverse approaches and ongoing dialogue.

In practical terms, the conference provided WFAE Board members and the Journal Editorial Committee a critical opportunity to meet face-to-face, adopt its draft by-laws, and implement its plan for this journal's future. When normally separated by great physical distances having a special time and place to communicate face-to-face—in a genuine *forum*—is a very special event. With its emphasis on media education, imagination, and collaboration, the Global Composition conference provided new members and interest in the WFAE to carry on into 2013, when we celebrate the 80th birthday of R. Murray Schafer, the 20th anniversary of the founding of the WFAE, and World Listening Day.

—Eric Leonardson
President, WFAE Board



Photo by Eric Leonardson

Regional Activity Reports

Australian Forum for Acoustic Ecology (AFAE)

by Jordan Lacey

The AFAE membership has been involved in a number of activities, the most substantial of which is the first national gathering of AFAE members at the Balance-Unbalance International conference (www.balance-unbalance2013.org), which is being co-chaired by AFAE committee member Leah Barclay. Leah and Anthony Magen have worked together to create this wonderful opportunity, where members will be able to meet and discuss future directions for the AFAE. The gathering centers around the provocation: "Is there a soundscape without landscape," which touches on recent discussions in the WFAE listserv regarding definitions of acoustic ecology. AFAE members will have the opportunity to engage

in sound activities, including Daniel Blinkhorn's Field Recording Workshop and Andrea Polli's Sound Walking Masterclass.

Jordan Lacey has initiated a soundcloud site (<https://soundcloud.com/groups/australian-forum-for-acoustic-ecology>) where AFAE members can upload their sound recordings to share with the world. This is part of an overall approach to attach a greater sound presence to online content and to create the possibility of increased engagement and conversation between members. The website is also a part of a push to encourage new and lapsed members into the forum, which is being led by the AFAE's new membership officer Susan Frykberg. There are many people interested in the sounds of nature and the everyday, and part of the AFAE's ambition is to create a forum in which these sounds and ideas can be shared by as many people as possible.

Regional Activity Reports *(continued)*

The AFAE continues to offer soundwalks to the general public through multiple events including the Melbourne Open House, the Melbourne International Jazz festival, and workshops such as Audio Architecture. The response to the soundwalks is impressive. With rare exceptions, there is a powerful reaction to the experience both of silence and engaged listening within AFAE soundwalks, which is a testimony to the commitment that forum members have in providing the public with interesting and varied experiences. The AFAE is hosting a presentation by Jason Sweeny and Martin Potter, recent AFAE members from Stereopublic (www.stereopublic.net), who will be discussing their iPhone application that brings the ideas of Murray Schafer, the WSP and acoustic ecology to a new generation of people seeking quiet. Stereopublic have managed to secure funding for their activities from many sources including TedX, which support the program based on its contributions to the health and well-being of society.

The AFAE enjoys a strong relationship with SIAL Sound Studios (<http://sound.sial.rmit.edu.au>) at RMIT University. Monthly meetings and other events are held in the Studios and members have access to an 8-channel playback system and a multimedia environment. SIAL Sound Studios also teaches the cross-university elective, Soundscape Studies, in which new generations are introduced to the ideas of Murray Schafer and the WSP, along with contemporary voices in acoustic ecology and urban soundscape studies.

American Society for Acoustic Ecology (ASAE)

by Jay Needham

The ASAE had a very productive and diverse year. The board underwent several changes in 2012 and I would like to welcome to the ASAE, Stephan Moore as Vice President, Kenya Williams as Membership Director and David Aftandilian as Secretary. We also recognize the hard work of our ASAE membership for the first half of 2012, including prior membership director Michael Doherty and co-chair of “The Global Composition” conference Sabine Breitsameter.

I’m excited to be serving a term as President and look forward to growing our organization and field. There are eight regional chapters within the ASAE. Edmund Mooney, who also serves as ASAE Treasurer represents the New York Society for Acoustic Ecology (NYSAE). Jed Spear represents our New England Chapter. Chris Preissing and Eric Leonardson serve as co-chairs for the Midwest Society for Acoustic Ecology (MSAE). In addition Eric serves as ASAE representative to the WFAE. Brandon Mechtley currently serves as the representative to the Southwest Society for Acoustic Ecology (SWSAE). Michael Doherty represents Colorado through the Colorado Society for Acoustic Ecology (ColoSAE). Glenn Bach (SCSE) represents Southern California Sound Ecology. The Pacific Northwest Society for Acoustic Ecology (PNWSAE) is currently being represented by Steve Barsotti. On a related note, the American Society for Acoustic Ecology’s members worked hard to create an impressive array of programming in 2012. Some of the year’s highlights include ASAE member and New York Society for Acoustic Ecology (NYSAE), founder Andrea Polli, serving as Artistic Director of ISEA2012 Albuquerque: *Machine Wilderness*. Bay Area Society for Acoustic Ecology (BASE) members Andrea Williams and Jeremiah Moore both presented at ISEA 2012, with Andrea giving an artist talk on Soundwalks and Urban Sound Ecology and Jeremiah exhibiting his new work *Listen Toward the Ground*.

Southern California Sound Ecology (SCSE) members attended a World Listening Day event sponsored by Listen Up Los Angeles! and SCAE is hopeful that a partnership will emerge for sound-related activities in Southern California. Additionally, SCSE member Alan Nakagawa was awarded a \$20,000 mid-career artist fellowship from the California Community Foundation. Chicago composer and Midwest Society for Acoustic Ecology co-chair Christopher Preissing presented *Water Music Series: A Field Recording Improvisation at Berger Park*. The event was sponsored by 6018NORTH and curated by Tricia van Eck. Additionally ASAE President Jay Needham performed *Chronography: animal* during IV Antarctic Art and Culture International Conference & Festival; Antarctic Art, Science, People and Polar Dialogs in Buenos Aires, Argentina. The piece was also performed with WFAE President Eric Leonardson at the Internationales Musikinstitut Darmstadt as a part of *The Global Composition Conference* on Sound, Media, and Environment in Dieburg Germany.

Canadian Association for Sound Ecology (CASE) / Association Canadienne pour l'Écologie Sonore (ACÉS)

by Andrea Dancer

The Canadian Association for Sound Ecology was in a process of organizational restructuring for most of 2012, which included such things as revisiting how we archive past material, information sharing, a new website board-member forum, and setting out protocols for administrative procedures. Some very necessary housekeeping! In terms of projects, CASE created an online archive of the last eight hand-rung bells in Canada for World Listening Day, R. Murray Schafer’s 79th Birthday. We also received written transcripts of speeches from the Gabriola Retreat: Hildegard Westerkamp, Eric Leonardson, Eric Powell, Noora Vikman, Barry Truax, and Charlie Fox. We are in the process of editing these into online versions. These represent an important snapshot of Acoustic Ecology from long-time practitioners in the field. This also brings closure to an overdue project that has tied-up major funding – opening space for new projects.

In March, 2013 CASE elected a new board that also met the aim of Canada-wide representation. We are looking to expand this structure toward regional chapters and taking time to create infrastructure first. Considerable effort has also gone into cultivating a strong working board this year. We restructured the executive to a tripartite chair and two vice-chairs striving for a more collaborative team presence along with the new board (including four new members) as follows: Andrea Dancer, Chair (Vancouver); Scott Smallwood, Co-Vice Chair (Edmonton); Eric Powell, Co-Vice Chair (Montreal); Mathew Griffin, Treasurer and Secretary (Toronto); Carmen Braden, WFAE Representative (Yellowknife); Raylene Campbell (Edmonton); and Kristen Roos (Vancouver). We bade farewell with much appreciation to Nadene Thériault-Copeland (President of CASE since 2005), Kristie Taylor-Muise, Audrey Churgin, Hector Centeno, and David Pacquette. CASE provided editorial support for the Festschrift honoring R. Murray Schafer’s 80th Birthday along with the WFAE and ASAE. It has been an honor to proofread the texts from Acoustic Ecology’s diverse global community and reflect on how Murray has shaped where we are all now standing. Andrea, the CASE Chair, also enjoyed writing one of the introductory texts for the Festschrift. Happy 80th Birthday, Murray!

Finnish Society for Acoustic Ecology (FSAE)

by Meri Kytö

The year 2012 had been a busy one for the members of the Finnish Society for Acoustic Ecology. Although the society itself has been catching its breath and laying back after the bigger efforts made for the *Turku is listening* project (2011, part of the Turku Capital of Culture events) the Finnish members have already started to work on new ideas. One such idea is translating R. M. Schafer's *A Sound Education* in Finnish. Lead by Olli-Taavetti Kankkunen, in collaboration with other members, this task is to be finished by the close of 2013. There will be some help hopefully from the Ministry of Education for the dissemination of the book to elementary schools in Finland. *Turku is Listening* is also continuing but in a broader scope with the *Hearkenings* project lead by Simo and Tuiki Alitalo. This is an environmental and community sound art project focusing on the ways that art and new technologies can be used to assist in the study of empowerment, protest and resistance (see more on the webpage www.kuulumia.org).

Also, in 2012 the FSAE continued its collaboration with TAMK (Tampere University of Applied Sciences) in the EU project *European Acoustic Heritage* (EAH). The other partners in the project were the Centre for Research on Sonic Space & Urban Environment (CRESSON, France), Phonogrammarchiv at Austrian Academy of Sciences (PHA-OAW), www.Escoitar.org (Spain) and Fundación Illa de San Simón (Spain) through the coordination of Axencia Galega das Industrias Culturais (AGADIC, Spain). The FSAE further helped in organizing a week long summer school in sound and a soundscape composition contest with a theme of water. The jury, chaired by Andra McCartney, selected the winner, a piece by Alejandro Montes de Oca, from 52 works submitted to the contest from 19 countries around the world. There was also a two day EAH conference on acoustic heritage held in the Werstas Auditorium in Tampere in September. The conference was followed by the opening of a travelling exhibition of European soundscapes. The EAH project webpage contains much content to review, including sound maps, "soundscape TV," the finalists' compositions, a downloadable research publication, pedagogical activities in various languages and so forth. (www.europeanacousticheritage.eu).

Hellenic Society for Acoustic Ecology (HSAE)

by Ioanna Etmektsoglou

The HSAE had a general assembly and board elections in May 2012. The main emphasis of the new Board is to increase the HSAE membership and to inform the wider Greek public about the existence of the field of acoustic ecology and its relevance for the quality of life and environmental sustainability in urban and rural areas of Greece. This year, our educational workshops for children, young people and the general public focused on two major themes and their ecological, psychological and aesthetic implications. These themes were (1) *Diving in the Sounds of the Ocean* and (2) *Games with Bird Calls and Songs*.

On the academic and cultural front, members of the HSAE Board (Ioanna Etmektsoglou, Katerina Tzedaki, Iannis Zannos, Kimon Papadimitriou, Kostas Paparrigopoulos and the Society's advisor and WFAE representative Andreas Mniestris have presented papers,

led workshops, or played their music at a number of international events related to acoustic ecology such as:

- *The Global Composition* conference in Dieburg, Germany (May 2012) www.the-global-composition-2012.org,
- *The Listening Cities Project*, <http://listeningcities.temporeale.it/listening-cities> (Florence, Italy; Vienna, Austria; Salford, UK; Lyon, France; Corfu, Greece).
- *Music and Ecologies of Sound* conference at Université de Paris 8, France www.musique.univ-paris8.fr/node/92.

We plan to participate and represent the HSAE at the International conference 'EchoPolis' (www.event2013.sd-med.org/en/echopolis-forum.html), which will take place in Athens, Greece in October 2013. The HSAE will be an official conference partner. Current involvement of the HSAE includes preliminary work for the Greek translation and publication of Murray Schafer's book, "The *Soundscape: Our Sonic Environment and the Tuning of the World*" and for the development of a research proposal on noise management as it relates to tourism.

Japanese Association for Sound Ecology (JASE)

by Masami Yuki

This report highlights some of the activities of the Soundscape Association of Japan (SAJ), the domestic organization which sponsors JASE. The SAJ has continued to promote research projects on soundscapes of the areas stricken by the mega earthquake and tsunami that hit northeastern Japan on March 11, 2011. Also, as 2013 celebrates SAJ's 20th anniversary, with a thorough review of our past activities, we have been trying to further improve the SAJ's organizational process and activities. As a result of on-going discussions, we have decided to shift our house journal from a printed version to a digital format which will contain sounds and videos using SAJ's website. As a part of special events during the 20th anniversary, SAJ will hold an exhibition featuring SAJ's activities and projects at the Natural History Museum and Institute, Chiba, from October 5th through January 1st, 2013 (www.saj.gr.jp/home/home.html).

United Kingdom & Ireland Soundscape Community (UKISC)

by John Levack Drever

As usual the UKISC members have had another tireless period of projects, conferences, workshops, studying, archiving, public talks, broadcasting, exhibitions, soundwalking, composing, campaigning, and so on, but as a group we have been somewhat inactive. This is going to change with a reboot of UKISC at an upcoming soundscape symposium in November 2013 at the University of Kent's new Medway campus by the historic docks. The symposium partners include Sound and Image Research Centre (University of Kent), Durrell Institute of Conservation and Ecology (DICE; University of Kent), Unit for Sound Practice Research (Goldsmiths, University of London), Chatham Historic Dockyard Trust, Kent Institute for Advanced Studies in the Humanities (KIASH) and UKISC. There will be an open call for participation shortly.

Soundscape studies: the Early Days and the Future

By R. Murray Schafer

Schafer will listen back nearly 50 years to the days when the subject of the soundscape was being first introduced in the Communications Department at Simon Fraser University in Vancouver, Canada. He will discuss the difficulties in finding acceptance for a new subject with new terminology, but also the excitement in discovering how rich the world is in sounds and how it might evolve as we participate in its evolution. Everyone with ears is a performer and a listener in the continuous symphony that surrounds us. Will it be beautiful or ugly?

Let's find out.

In 1965 I was invited to join the faculty at Simon Fraser University in Vancouver. The university was just about to open and our department was to be called "Centre for Studies in Communication and the Arts." I think the title was influenced by Marshall McLuhan who had written extensively about the relationship between print, and cross-cultural sound communication. When the university opened, our department consisted of a social psychologist, a mechanical engineer, a theatre director and myself — a musician. The expectation was that we would bring the arts and sciences closer together, but the plan never succeeded. The result was that by the third year we had developed independent programs, some of which were successful while others floundered. I had managed to establish a very good electronic music studio; but as we had no music department there were only a few students interested in it and nothing much of significance was produced. It would be several years before we were to develop the program in soundscape research that has since been recognized internationally.

Vancouver is a very enjoyable place to live. The climate is moderate — without the freezing winters of Winnipeg, Toronto, or Montreal. The snow remains on the mountain peaks where it can be appreciated without having to be shoveled or driven through. But before too long one thing began to bother me. As the climate in Vancouver is quite warm in winter there is no need for storm windows (i.e. double glazing) as in other parts of the country, and there is substantially less insulation in the walls of buildings. This meant that traffic and other external noise could be heard inside buildings much more clearly than in buildings in colder environments.

I joined an anti-noise organization, but I didn't stay with them very long because the few people who gathered each week to complain had no idea of how to increase our membership or bring our complaints to the attention of the authorities.

The period I am speaking of (1965–1975) was probably the noisiest decade in the Western World. Reconstruction in Europe after the Second World War (1939–1945) was matched in Canada as cities were expanded to accommodate floods of refugees. Noise was indisputable. Noise was progress.

Jet air travel was rapidly expanding and jets produced substantially more noise than turboprop planes. The Concord jet, the first sonic boom-producing passenger plane, was flying across the Atlantic from Paris to New York and would soon be flying to inland destinations leaving its sound print all across the country.

The automobile industry was busy producing what they called "muscle cars," with more powerful engines and substantially more noise.

The parallel in the entertainment industry was the invention of Rock Music, producing higher levels of amplification than music had ever achieved before.

I tried again to bring some attention to these unpleasant facts about sound by introducing a course in Noise Pollution at SFU. A few students enrolled but most of them dropped out when they realized they weren't going to hear their favorite rock bands. It was then that I had an inspiration. We would study all sounds, not merely those that were unpleasant or dangerous. Each student was to keep a sound diary. What were the sounds you liked? Or disliked? What was the first sound that woke you up this morning, or the last sound you heard before you fell to sleep last night? What was the most beautiful sound you heard today? Or the ugliest? I asked the students to copy out any interesting references to sounds in the novels they might be reading for other courses, and we would discuss how different the soundscapes of the past are from those of the present, or how they vary in different countries and cultures.

I pointed out how all sounds of the present will soon become sounds of the past and asked whether there should be museums for disappearing sounds? Actually I was beginning to assemble a reference library of significant sounds found in descriptions from other places and times.¹

At this point the word "soundscape" didn't really exist, or at least was unknown to almost everyone. I had derived it from the word "landscape," which was equally unknown until Petrarch, the fourteenth century Italian poet and scholar decided one day to walk to the top of a mountain in order to see the view. What he saw was something that had never been seen before and therefore had to be described by a new word: Landscape. When I first introduced the word "soundscape" to describe what we were listening to every day, there was a slight commotion among the academics and acousticians, one of whom asked whether "smell-scape" would be the next subject to be investigated.

If you don't have a word to describe something it doesn't exist; and so new words have to be constantly invented. But in the early days the acousticians thought that the word "soundscape" was quite unnecessary. Sound could be described quite adequately by phons, decibels, and other technical terms that the general public would find incomprehensible.

But sound terminology need not conflict. What the term soundscape has given us is an opportunity to study sounds past and present, useful and useless, beautiful and ugly, exciting and boring — in short it unites the practical and aesthetic aspects of

sound allowing us to study and describe the acoustic environment through which we move every day of our lives. Some people may be shocked that we are talking about designing the whole acoustic environment; but I would like to point out that urban environments are already designed to accommodate cars, trucks, horns, whistles, sirens, planes — the noises produced by these machines have already been accepted as inevitable.

All we are asking is that we might bring a little more talent and imagination to the next round of talks about traffic and vehicle designs involving sound.

By 1975 the grant organizations were beginning to take our work in acoustic design more seriously. I was especially pleased to receive a large grant from the Donner Steel Foundation that allowed me to employ several young people. It was at that time that Hildegard Westerkamp and Barry Truax joined the team. The work we now wanted to undertake would take us to many parts of Canada and ultimately to Europe.

We began to make recordings of unique sounds that were to be heard only in certain times and places: a unique factory whistle, some ancient church bells, a noon whistle on a court house, anything, in fact, that helped to give a town or city a unique character. We called these *soundmarks* because like “landmarks” they help to distinguish the places where they are heard. I might mention that we have been contacted on more than one occasion by people wishing to recover the soundmarks of their town or village that had at some point been discontinued.

After we had produced a few short radio programs we were approached by the CBC with a proposal to produce a series of ten one-hour radio programs entitled “Soundscapes of Canada.” Some of these turned out to be quite unique. In one of them entitled “Directions” two members of the soundscape team travelled by car across Canada, from Halifax to Vancouver, and each time they needed information on how to get to their next location the answers they received were recorded so that the program consisted of an hour of “directions” in all dialects and languages across the country.

Another program introduced “soundmarks” — significant sounds like noon whistles, chimes and bells — that gave a distinctive acoustic character to various towns and cities. It is surprising how many of these sounds will never be heard again, except on our recordings.

In 1975 the World Soundscape Project attempted to live up to its name by undertaking a visit to five small villages in five countries in Europe: Sweden, Germany, Italy, France, and Scotland. Each of these villages was driven by one industry alone. The reason these particular villages were chosen for study was because they were close to the cities I was to visit on a lecture tour. I took three assistants, Bruce Davis, Peter Huss, and Howard Broomfield with me, and we set out on our travels. Our study of the five villages revealed sound-patterns that were unique to each village and the way these sound-patterns dictated the social life of the village.

As it turned out we were to play an important role in preserving one of the villages. This was Lesconil, a French fishing village in Brittany. While we were there it was announced that a new super highway was to pass close to the village. The fishermen pointed out that the noise of the highway would frighten the fish and kill the fishing industry. We endorsed their fear and the subject attracted the attention of the Paris press. It also led to a very beautiful radio program entitled “Questionnaire pour L’Esconil.”² That was one of the very few times we have been successful in speaking out to protect the environment.

This is how the World Forum for Acoustic Ecology should function. We should always keep in mind what *acoustic ecology* means. It means speaking out against destructive and unnecessary noise. It means saving our ears and those of others who might not realize that sound can be dangerous.

I don’t think anything like *Five Village Soundscapes* had ever been done before our study. It made clear that each village possessed a unique acoustic environment and that sudden changes to these patterns can impair or destroy the social life of the village.

Our work was endorsed and expanded when a Finnish group of researchers revisited all five villages twenty-five years after our investigation. This made it possible not only to compare the sounds heard in 1975 with those heard in 2000, but it also revealed changing attitudes to the sounds heard over a quarter of a century.³

And now may I ask the big question? Will there be more studies of the evolving soundscape in other parts of the world? Will the WFAE learn from what has been achieved and carry the work forward to assist in better acoustic planning for a healthier future? Can we expand our research and attract more interest in it world-wide?

Returning home to Vancouver we began to do a lot of field recording with the intention of building archives of quite common sounds that were in a state of change or were disappearing. I did not always share my colleagues’ passion for recording in order to make radio programs, but there were times when we were able to use the microphone to gather some quite unique patterns of sound. On one occasion at Mission City, near Vancouver we did a twenty-four hour recording in a field near a monastery. Each hour was identified by the recordist on duty so that later we could follow the circadian rhythms. We also produced a one-hour radio program of our recordings so that listeners could easily follow the rhythms and marvel at the gradual changes.

We often recorded in what we might term a heuristic manner — that is, by setting up a system that would record without our presence — because, as everybody knows all creatures behave differently when they are interfered with or left alone.

The first extensive soundscape study we made of a Canadian city was that of Vancouver. It was to consist of a book and recordings. We went back as far as possible in our research, interviewing native people and early settlers. We read all the ancient historical documents that had anything to say about sounds. Early photographs of people, streets, and vehicles had to be carefully examined for potential sounds that could only be imagined. We asked the oldest people we could find to describe the soundscape in the days of their youth.

Vancouver is a relatively young city so it was possible to bring back much of its past. We were able to record many of the ancient soundmarks of the city: bells, horns, whistles that still existed and could be sounded.

An unpredicted development occurred when the German radio producer Klaus Schöning broadcast a sequence of horns and whistles we had recorded, giving the impression that it was a noise concert as used to be presented by Luigi Russolo and the Italian futurists. As a matter of fact the whistles on all Canadian trains are tuned to E-flat minor triad on 330 hertz suggesting harmony not dissonance. Factory whistles were often also tuned in the days of their popularity but today they have almost totally disappeared. People get to work on time by listening to the radio.

We asked people to copy out all references to sound in the novels they were reading, past or present. This gave us an enormous collection of sound descriptions, not only from Vancouver or Canada but from many exotic locations outside of Canada. And the important thing to remember is that the soundscape is always changing; and those changes can be for better or worse, depending on the actions and desires of the people living with them.

It was during the 1970s that the term *ecology* began to attract a lot of attention. I believe I was the first person to adapt the term to sound. In *The Tuning of the World*, I defined Acoustic Ecology as “the study of the effects of the acoustic environment or soundscape on the physical responses or behavioral characteristics of creatures living within it.” In other words the soundscape is both positive and

negative. It can be birds chirping or a jet aircraft taking off. Ecology is not simply an effect; it is a relationship.

In this way we were able to assume that all sounds were innocent until proven guilty. We spent less time pointing our fingers at guilty sounds and began to concentrate on planning soundscapes for the future.

Is it possible to have a noise-free environment? Probably not. But it can be a quieter one and the soundscape *is* gradually becoming quieter. At least a great many of the dangerous sounds have been removed. Now we can think of carefully redesigning the soundscape by adding sounds that will harmonize with the environment and with each other. To accomplish that we need composers, musicians, psychologists, ecologists, acousticians, in fact anyone with open ears. What are we waiting for?

The long term biophonic technique of recording was later perfected by Bernie Kraus who made splendid recordings of nature in many different parts of the world.⁴ The secret of phenomenological recording is not to interfere with the sounds around you. It is exactly the opposite of focused recording where one tries to eliminate interference from surrounding sounds. This is the aim of the interviewer or radio recorder. Bernie perfected phenomenological recording and all soundscape recorders can learn a lot from him.

As we go back in time we learn that there are no sounds in nature that can damage our hearing. God was a first-rate acoustical engineer. He put our ears on the sides of our head out of danger from our raised voices. In fact, our voices are calibrated so that when in normal use they can do no damage to listeners. But give me an amplifier and I can kill you.

Can we really improve the soundscape? Of course we can. We must go back and educate children and young people to listen more carefully. I have written some little books of acoustic games intended to get listeners to pay more attention to the soundscape around them.⁵

Hildegard Westerkamp and others have introduced sound walks to people in many countries. There are many kinds of soundwalks and they are easy to organize. The one I sometimes employ is to take a blindfolded group of people to an unknown environment. It need not be far away. Once there I get them to try to “visualize” the place we are in using only their ears. Is it an open space or closed? How far away are the walls? What kind of materials are around us? (You can discover this by tapping with a stone) And after we all have a mental image of the place we remove our blindfolds. What an amazing difference between what we heard and what we now see!

The word “soundscape” has become a very important word, not only because it defines the acoustic environment but also because it gave us a clear definition of what is being studied and why. It doesn't matter who discovered it. We all own it and rely on it frequently. It often seems out of place in urban environments. No matter; the same is true of landscape. Both are positive words, beautiful words. And we can make them more beautiful if we begin to tidy up some of the mess we've made of modern environments. Now we have a World

Listening day (July 18) in which we can draw *everyone's* attention to the excitement and the beauty of the acoustic environment. Can we improve our ability to listen? Yes, we can. Can we improve the acoustic environment around us? Certainly we can.

Endnotes

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About the Author

R. MURRAY SCHAFER has achieved an international reputation as a composer, an educator, environmentalist, scholar and visual artist. Born in Sarnia, Ontario, in 1933, he was raised in Toronto. As the ‘father of acoustic ecology,’ Schafer has been concerned about the damaging effects of noise on people, especially dwellers of the ‘sonic sewers’ of the city. Of the various publications Schafer released after his work with the World Soundscape Project, the most important is *The Tuning of the World* (1977) where he summarizes his soundscape research, philosophies, and theories.

Schafer's dramatic works employ music and theatre in a manner that he calls the ‘theatre of confluence’ (a kind of *Gesamtkunstwerk* reflecting his urge to explore the relationships between the arts). His diversity belies generalizations of style; his work could be described as a synthesis of 20th century avant-garde techniques with the 19th century romantic spirit.

He has received many awards such as the Canadian Music Council's first Composer of the Year award in 1977 and the first Jules Léger Prize for New Chamber Music in 1977. Recent awards include the Molson Prize, the Glenn Gould Prize, the 2010 Dora Award for his Soundstreams-commissioned opera *The Children's Crusade*, and the 2009 Governor General's Performing Arts Awards for Lifetime Artistic Achievement. Schafer holds honorary doctorates from universities in Canada, France and Argentina, and his own publishing house, Arcana, where his entire oeuvre may be investigated.

HAPPY BIRTHDAY TO MURRAY SCHAFER,
founder of Acoustic Ecology

FROM THE WFAE MEMBERSHIP!

Insights into the Global Composition Taken at Three Stricken Places in Japan

By Keiko Torigoe

Introduction

Earthquakes are the movement of the Earth's surface, as activated by its sudden vibrations, and the sound of the Earth. In other words, sound is telling us that the Earth itself is an active "living organism" filled with hot magma that may shift to create earthquakes.

Earthquakes are among the natural disasters that occur often in monsoon Asia. In particular, Japan experiences many earthquakes. We who live in Japan have come to recognize this fact, and are more conscious of our land being located on large active faults that run under the ground.

A mega quake occurred off the coast of Sanriku on March 11, 2011. The resulting tsunami wiped out many cities and communities along the Sanriku coast, with estimates of nearly 19,000 people who disappeared or were killed. The disaster also triggered a nuclear plant accident and subsequent events; consequently we have a renewed awareness that our soundscape is in essence a global composition, a work tuned through the providence of nature. As such we feel the importance of the now nearly-forgotten culture of those who had co-existed with nature, sharing soundscapes within their environment. At the same time, we also feel it is important to carry out research and recordings on our everyday life.

The Great East Japan Earthquake has brought major changes to the soundscapes of Japan. Some sounds disappeared. Some sounds were newly born. The changes are continuing. Although some sounds remain the same, the way people hear and listen has been altered, either abandoned or transforming into something new.

This paper reports on my experiences and reflections on the concept of Global Composition, primarily those related to the "Visiting 100 Soundscapes of Japan Project," which is part of our "Soundscape Project for Earthquake Disaster" by the Soundscape Association of Japan.

Visiting 100 Soundscapes of Japan

The members of our Soundscape Association of Japan (SAJ) agreed it was important to administer surveys focusing on the impact on Japanese soundscapes after the March 11th event. Therefore we created the Soundscape Project for Earthquake Disaster 311 (March Eleven) in order to record and research the soundscapes at the stricken places in Japan. The SAJ is currently working on four projects as Soundscape Projects for Earthquake Disaster 311: "Visiting 100 Soundscapes of Japan Project," "Fukushima Project," "Fixed-Point Observations Project" and "Earwitness Project." "Visiting 100 Soundscapes of Japan Project" is based on "100 Soundscapes of Japan: Preserving Our Heritage," which was conducted between 1994 and 1997 by the Environment Agency. The aim of this project was to encourage individuals or groups throughout the country to recommend soundscapes that can be appreciated in specific sites. It was also aimed toward locals who wished to conserve soundscapes for the next generation. We therefore selected 100 soundscapes out of those recommended to serve as symbols of the richness and wide



Fig. 1: Site Map. Photo by Keiko Torigo

variety of Japanese soundscape as well as representative of Japanese nature and culture. A couple of points are relevant: after the project was done, the sounds and images of these places were recorded and published in various media¹ and it would be 10–14 years later these areas would be impacted by the mega earthquake and tsunami². Some of the 100 soundscapes are located in the stricken area. Therefore, whether by irony or good fortune, we have some soundscape data with which to compare before and after the disaster.

The aim of this project is to visit those sites to see how those soundscapes have changed, or have not been altered, by comparing them with those that were recorded before the disaster. The following summarizes our project findings that we've conducted so far at the three sites shown in fig.1.

Bell-Ring Cricket in Miyagino

The Bell-ring cricket (fig.2), "Suzu-mushi" in Japanese, is *Homeo-gryllus*, one of the most popular crickets in Japan known for its sound. Sendai, Miyagi Prefecture has several places that one might enjoy the traditional practice of appreciating the beautiful sounds of bell-ringing crickets, which can be heard for example in Mt. Takamori and Masue-no-mori forest.

The earliest reference to "Bell-ring crickets in Miyagino" dates back to the early 9th century when General Sakanoue Tamuramaro (AD.758–811) was sent by the then emperor to subjugate barbarians living in the northern area of Japan. There is a written document



Fig. 2: Bell-ring Cricket. Photo by Keiko Torigo

by Tamuramaro saying that he heard the beautiful sounds of bell-ringing crickets along a path on his way to Taga Castle in today's Sendai City. During the Edo period, through the 17th to the 19th centuries, there was a special field where young ladies who were living in the castle visited in order to enjoy listening to the crickets

and hunting them (fig.3). The street from the castle to this field was called "princess road to Miyagino." The bell-ringing crickets in Miyagino, which are known for their singing in the "seven-ring" cycle, were presented to shoguns, that is Tokugawa generals, from the Sendai clan in the Edo period.

Although the crickets were there until around the mid-1930s, they became extinct due to insecticides sprayed by the Occupation Forces after World War II and the construction of a baseball stadium in recent years. However, a committee to conserve the environment for bell-ringing crickets, which was set up by the Association for Promoting Miyagino Regional Development, has encouraged citizens to protect the bell-ringing crickets and return them to nature, creating an environment that is good for insect living.

On September 13, 2011, about six months after the quake and tsunami, we visited the committee members and learned the history and the current situation of the bell-ringing crickets in Miyagino. After dark, we visited some of the places related to the sounds of the insects. As the sites were unaffected by the tsunami, we were surrounded by various sounds of crickets, including bell-ring crickets, just as we had expected. After that, as the final destination of our visit that day, we went to an estuary of the Nanakita River which had been submerged for several days following the tsunami. On the way, the headlights of our car revealed that the fields were unable to grow rice because of the salt water. As the two entomologists of the research team were telling us that the cricket eggs would have been broken by the pressure of sea water, we were expecting a quiet landscape near the estuary without sound or else minimal, perhaps a feeble sound of crickets. However, when we got out of the car near the shore, we heard various powerful sounds of crickets echoing strongly in the dark.

Kaminari-iwa: Thunder Rock

Goishi Kaigan shore in O-funato, Iwate Prefecture, is a 6-kilometer ria coastline at the south point of Suezaki Peninsula that juts out in O-funato Bay. The shore has eight scenic spots, including "Goishi-hama" beach which is covered by black round pebbles shaped like "go" pieces, from which the name of the shore comes.³



Fig. 3: Cricket hunting, image of wall poster at the headquarters of the Bell-ring Crickets Conservation Committee of Miyagino City Map. Photo by Keiko Torigo



Fig. 4: *Thunder Rock*. Photo by Keiko Torigo

Kaminari-iwa is one of them. “Kaminari-iwa” in Japanese means “Thunder Rock.” It is a huge rock, known for its thundering sounds. According to the web site of the Ministry of the Environment, the rock produces “a sound of thunder that slashes incoming waves to make you shrink. You can always hear the sound regardless of time and season.”⁴ On November 23, 2011, we visited the site to learn

about the tsunami’s impact on the soundscape there. We went to a rest station of Goishi Kaigan shore to meet Hirofumi Ogawa who manages the place (as he had been introduced, as per the O-funato City’s Commerce, Industry and Tourism Section). According to Ogawa, it is the structure of the thunder rock that generates the loud explosive sound, and the process is as follows. There is a cave inside the rock. Waves rush into the cave, pressurizing the air inside so that when it is released into the ocean, the rock generates a loud thundering sound. However, after the tsunami, the sound became much softer and less frequent. According to Ogawa, this is probably due to reduction in the amount of air inside the cave caused by the fallout of rocks made by the quake.

He took us to a site from where we could look down onto the rock directly. Walking in a pine grove behind the rest station, we were able to see the giant rock below a precipice (fig.4).

We listened attentively in the cold rain. But we could barely hear the sound of the rock. “Hey, it sounded just now,” said Ogawa, but we could hear nothing. As Ogawa was telling us several times that this was the sound, we began to catch it albeit faintly. It was like a soft beating that only sometimes echoed in the rock.

Each of us pondered the fact that although the giant rock looks the same, it barely manages to hold its life. Listening to the voiceless Thunder Rock, we recalled the fact that sometimes quietness can be more meaningful than a loud sound. Personally, I deeply regret that I had not visited the place before the tsunami. I had been thinking it would be easy to visit and listen to the sound of the thunder rock at any time.

On our way back, Ogawa took us to Goishi-hama beach (fig.5). He told us, “I can clearly recall the unique high-pitched rattling sound of the stones moving in the waves. But after the tsunami, the sound of the stones lowered its pitch and became heavier.” We noted from the shape of the shore near a seawall that the tsunami had taken away many stones.



Fig. 5: *Goishi-hama Beach*. Photo by Keiko Torigo

Waves of Izura Kaigan Shore



Fig. 6: *Izura Kaigan Shore*. Photo by Keiko Torigo

Izura Kaigan shore, located in Ibaraki Prefecture, consists of five large and small inlets. This shore is known as a place to which Tenshin Okakura (1863–1913), the father of Japanese modern art, moved the “Art Institute of Japan” in 1906, when he left Tokyo

College of Fine Arts. Tenshin worked here together with his pupils, who later became masters of Japan’s modern painting. The sound of waves on the Izura Kaigan shore, the place which Tenshin loved for its landscape (fig.6), was described in the Environment Ministry’s web site as a place where “you can hear the sound of savage waves of the Pacific Ocean washing the cliffs and reefs near a hexagon pavilion, which sometimes sound softly or violently reflecting your feelings.”⁴

“Rokkaku-do,” the hexagon pavilion, is an arbor that was designed by Tenshin and constructed on a rock base projecting over the sea on the premises of his house. The pavilion is the symbol linking Izura Kaigan shore and Tenshin, as it must have been conceived while he was deep in thought looking upon how the waves of the Pacific Ocean broke while listening to its sounds. However, when the tsunami hit the shore, the whole construction of the pavilion was swept away by the first wave, leaving only its base. (fig.7)

When we visited Izura Kaigan shore on March 2, 2012, the first place we went to was the Tenshin Memorial Museum of Art, Ibaraki. In the museum, a three-dimensional model indicated the location of Tenshin’s house and helped us to understand that as he and his pupils were working toward their new movement of arts, they did so while immersed within the sonic backdrop of the waves. In the meantime, the restoration work of the hexagon pavilion was on-going, and we heard various sounds related to the construction work coming from behind the fence. We reflected on the words that



Fig. 7: *The site and the surroundings of the pavilion after it was swept away by the first wave, leaving only its base*. Photo by Keiko Torigo

once described the soundscape associated with Izura Kaigan. Sitting still on the beautiful shore, we tried to listen to the sound that he must have heard back then. It was clear that the sound of waves we heard at Izura Kaigan shore was not the same as the one to which Tenshin had listened. Most importantly, local people now hear the sound of the ocean differently before and after the March 11 disaster.

These sites I have described embody the underpinnings to the concept Global Composition of Soundscape. Our findings recognize the changes we found in the places stricken by the tsunami. Through this work, I have confirmed my speculations and perceptions after visiting the three sites, and would like to further expound on the three phases of global composition.

Three Phases of Global Composition: Global Composition Played by the Globe

The fundamental player of “Global Composition” is the earth itself. Visiting the stricken sites helped me to understand clearly this fact. For example the quake and the tsunami made various impacts on the natural soundscapes by changing the forms of nature as we observed in the cases of Thunder Rock and Goishi-hama beach. The mega quake caused subsidence along the coastal line. This must be one of the reasons that the rock lost its voice as the amount of air taken inside the cave was reduced due to its fall. On the other hand, “Global Composition” consists of various types of natural sounds: sounds of plants and trees and the sounds of natural creatures such as animals, birds and insects. Mankind is a member of those natural creatures, but it is only in the recent history of the earth that humans made their appearance there.

Most of the places we visited were by the seashore. This was partly because the damage by the tsunami was much bigger than that of the earthquake. The devastating tsunami has taken away upper layers of soundscapes once covering the surface of the coastline. What was left there was the fundamental layers of soundscape which consist of natural phenomena such as ocean waves and winds as well as sounds of natural creatures such as crickets and birds.

What we confirmed when we visited the bell-ringing crickets in Miyagino was the fact that these insects are living vigorously even in the tsunami-affected places. It is true that a quake and a tsunami have an impact on natural soundscapes by changing the forms of nature, as we observed in the cases of Thunder Rock and Goishi-hama beach. But, compared to the big change of the “human soundscape,” it seems that there was less impact on the soundscape of wildlife, notably plants and other creatures. On the other hand, the loss of the hexagon pavilion shows that man-made structures are very vulnerable to the fury of nature.

What struck me most when I visited the three places was a stark contrast between the completely destroyed areas of tsunami-stricken communities along the coast to the natural landscapes that seemed to be full of life. We have sayings in Japan like “tsunami is the cleaning of the god” and “the ocean is reset by the tsunami.” In fact, Kesennuma’s oyster farmers in Miyagi prefecture report that their oysters this year are growing twice as fast as before. Fishermen who live amidst the ocean seem to be aware of these mysteries. What I recall here, drawing upon soundscape research and design, is a passage in *The Tuning of the World* by R. Murray Schafer: “Because the production of sounds is so much a subjective matter with modern man, the contemporary soundscape is notable for dynamic hedonism.” He then elaborates, as in *Utruisque Cosmi Historia* by Robert Fludd,

...there is an illustration entitled “The Tuning of the World” in which the earth forms the body of an instrument across which strings are stretched and are tuned by a divine hand. We must try once again to find the secret of that tuning.⁵

Global Composition as “Relationship” in the Sense of Culture

Global Composition is the relationship that human beings create within their surrounding environment; in other words, the composition is a soundscape itself in a fundamental sense.

Thunder Rock, for example, originally had no such name. It was only called that when people described the sound made by the rock as thunder. But the naming drew many people to the place, and the rock became a soundmark of the area. Even after the tsunami took away the sound of the rock, the relationship between the people and the rock remains the same, based on the sonic memory of the thunderous vibrations. Yet, the rock lost its voice, and therefore the soundscape has been altered.

Thunder Rock exemplifies the meaning of “soundscape,” when defined, for example in Barry Truax’s 1978 *Handbook for Acoustic Ecology*, as “an environment of sound with emphasis on the way it is perceived and understood by the individual, or by a society. It thus depends on the relationship between the individual and any such environment.”⁶

Individual sense-making of our surrounding environment is the essence of our cultural experiences. This idea explains why various cultures across the world are formed according to the nature of their lands. If the rock is a musical instrument created by a god, this “instrument” was taken away by that deity. The Japanese culture draws upon customary understandings of natural calamities; such tradition informs, one is only allowed to live for a time alongside nature, as it is created and controlled beyond one’s will. Consequently, a “sense of vanity of life” permeates the core of Japanese culture, and one of its significant features is the ability to live alongside nature.

In the past it was believed by the Japanese that the voices of the dead existed in the sounds of crickets. When I visited bell-ringing crickets in Miyagino, I became aware of that belief, as I stood under the moon on the sixteenth night of a lunar month near the estuary of Nanakita River. It was then, I could understand the heart of our predecessors who sought for their ancestors’ souls amidst the sounds of crickets living under green leaves cloaking the ground.

Global Composition in Our Listening Activities

Global Composition is ultimately created and formed by our individual listening activities.

The sound of the waves we heard at Izura Kaigan shore is not the same as the one Tenshin had listened to in several senses. These sounds are heard differently before and after the March 11 disaster. When we visited Izura Kaigan and other shores, I could not help feel afraid as I observed the dashing waves from the Pacific Ocean and listened to its sound. Considering the fact that I only watched the tsunami on television, the locals who actually experienced the disaster must be having quite different views of the ocean and its sound. These memories may exceed imagination.

On the other hand, I would like to report the existence of “ears to tsunami” which arose into our consciousness largely due to the mega quake and tsunami in 2011. The coast of Sanriku has been repeatedly attacked by destructive tsunamis since ancient times. We are now digging out such memories from the past:

The seawater was beginning to get rough at a high volume, then receding from the coast gradually and picking up speed. It looked like a giant monster rising on his black dress. The water became extraordinary swollen within the dark off the coast, and then as if the time was just ripe, it turned into a towering wall of water and began to move toward the coast. At that time, the local people near the shore were drinking and dining without realizing the dreadful scenario within the

ocean. When they suddenly heard a boom, they looked at each other puzzled. Some thought it was thunder and others thought it was the sound of a cannon booming.⁷

What was stated above is based on a story told by the people of Sanriku about a devastating tsunami in 1896, known as the Meiji Sanriku, to a notable documentary writer, Akira Yoshimura (1927–2006) who visited them in 1960. This is an earwitness account of the soundscape of the disaster. Many people had heard the sound of the tsunami that was triggered by an undersea earthquake. Consequently, the people of Sanriku became sensitive to changes in the environment, including sounds. It was also reported that soon after the disaster, people got confused and upset when they misheard other sounds as those of a tsunami.

After that, the area was attacked again by a big tsunami in 1933 and another one caused by the Chile Earthquake in 1960. In the town Taro, which had experienced many destructive tsunamis, a great seawall called the "Super Dike" was constructed. It was more than 10 meters high from sea level when completed in 1978. However, the wall deprived the locals of the ocean landscape visually and aurally. In 2011 many people in the town were killed by the tsunami that went easily over the tall seawall. They included those who didn't run away because they had trusted the man-made artifact.

Public trust in science was betrayed in a similar way with one of the worst nuclear accidents occurring in Fukushima. As nuclear power can be seen as a symbol of science and technology in the modern era, this accident revealed a problem of modern civilization in which human beings think they have the power to control nature. We are beginning to recognize the real problem, in that we attempt to separate ourselves from nature.

How did the people in Sanriku hear the sound of the tsunami on March 11, 2011? This continues as one of the pressing, and most critical questions for us to answer, as our research consists of seeking and collecting "earwitness accounts" of the tsunami on March 11.⁸

Final Remarks

Two years have passed since the mega quake attacked Japan's way of life. Many problems have not been solved. Some problems have become worse or more complicated. What we can do, for certain, in this circumstance is to record and report what we have lost, what we have experienced and what we remember. Therefore, I believe it is worth reporting our activities and findings regarding the soundscapes in places stricken like the Tohoku coast. In this way, our experience in Japan may be shared with members of the larger soundscape community of the world. I hope therefore what I wrote here may become an inspiration or motivation for others to think and discuss ideas related to "Global Composition" and "acoustic ecology."

Acknowledgement

This article is based on my preceding draft presented for the Global Composition Conference at Hochschule Darmstadt,

July 25–28, 2012. The original article was subtitled "Ongoing Report on the Soundscape Project for Earthquake Disaster 311 by the Soundscape Association of Japan." Ongoing Report 2 was authored by Koji Nagahata who related information on the Fukushima soundscape. In addition to our paper presentations, we prepared a small exhibition at the library, the details of which were reported in another paper. There we opened discussion every afternoon throughout the conference in order to elaborate on the findings of our research directly with the participants at the workshops.

I would like to thank our contributors and guides who explained to us the change in their soundscapes at the stricken places and everyone who came to our exhibition and workshop at the conference. I also would like to express special thanks to Prof. Sabine Breitsameter who provided us with this precious opportunity, Mr. Michael Paull and Ms. Natascha Rehberg who helped us with the workshops, and my colleague, Koji Nagahata who leads SAJ's Earthquake Disaster Project.

About the Author

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Endnotes

1. Keiko Torigoe, "A Strategy for Environmental Conservation," From Awareness to Action, The Royal Swedish Academy of Music, 89 (1999), 103–109.
2. There are two different series of video films; Japanese 100 Soundscape Videos [Japan's sound scenery (top) 100 compilation: in sound and images. They are catalogued in the British Library no. 1CV0003363 – 1CV0003382; 100 Japanese Sounds to Remember: catalogue no.1CV0003383 – 1CV0003392].
3. "Go-ishi" is a black round piece used for the game of "Go," one of the most popular games together with Shogi (Japanese chess).
4. <http://envgis2.nies.go.jp/oto> [in Japanese]
5. R. Murray Schafer, *Tuning of the World* (Toronto: McClelland and Stewart Limited, 1977).
6. Barry Truax ed., *Handbook for Acoustic Ecology* (A.R.C. Publications, 1978), 126
7. Akira Yoshimura, *Sanriku Kaigan Oh-Tsunami* (Bungei Syunjū, 2004), 21–22 [in Japanese]
8. One example of the recent studies on the earthquakes of the past is as follows: Hisao Funaba, "Sounds of the Great Kanto Earthquake described by the Ferris schoolgirls," *Soundscape (Journal of Soundscape Association of Japan)*, 13, (in press). [in Japanese]

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What Should the Soundscape Community Do When Listening to the Soundscapes of Fukushima?

By Koji Nagahata

“Keeping silent after Fukushima is barbaric.”

– R. Sakamoto (2011)¹

Introduction

A magnitude 9.0 earthquake, the most powerful recorded in Japanese history, struck off the coast of eastern Japan on March 11, 2011; the quake was felt through quite a large area of Japan, and strong tremors shook the Tohoku region especially hard. This quake also triggered an enormous tsunami (tidal wave), which caused severe damage to the Pacific coastal areas of eastern Japan.

The combined disasters related to the earthquake caused immense damage. According to one official document (National Police Agency of Japan 2013), the disasters were responsible for the deaths of 15,879 people, while 2,700 people are still missing. Moreover, 128,911 houses collapsed entirely, and 268,882 houses were partially destroyed.

The quake and tsunami caused secondary disasters in addition to their primary direct paths of destruction, with the serious accident that occurred at the Fukushima Daiichi Nuclear Power Plant being one of the worst. It forced residents living within 30 km from the power plant as well as residents living in areas of extremely high contamination, where radiation levels exceeded 20 mSv/year, to evacuate. Although the restricted areas have been reduced gradually, and residents of relatively less contaminated areas have slowly been returning to their home towns, there are still many evacuees forced to live far away from their home towns. In addition, many people who lived outside of the restricted areas also evacuated voluntarily.

Fukushima city, where I live, is located 60 km from the Fukushima Daiichi Nuclear Power Plant. However, a large amount of radioactive contamination reached the city as a result of the direction of the wind on the day of the accident. Therefore, for most of the city, the current radiation dose levels are estimated as exceeding annual public dose limits (i.e., 1 mSv/year). In this situation, a large number of people, including my family (except me), evacuated the city voluntarily. According to a statement by the mayor in 2012, at least 6,000 people, or about 2% of the residents, evacuated to areas outside of Fukushima. Thus, the daily lives of the city residents have changed significantly compared with before the quake, and in fact their lives continue to change even now. Along with these lifestyle changes among the residents, the soundscapes of Fukushima have also been changing.

Recording changing environments is the true study of soundscapes. Schafer (1977; 1993) proposed we consider the relationship between us and the sounds within our environment to better understand how that relationship is impacted when those sounds change around us. In his essay, *The Soundscape*, more than three decades later, his question remains relevant, inquiring again “what is the relationship between man and the sounds of his environment and what happens when those sounds change?” (Schafer 2012, 95). These are the key issues of soundscape studies. Furthermore, we can say that researching the changing of soundscapes and then reconsidering and discussing desirable forms of soundscapes in response to those research results comprise

the process of soundscape design as interdisciplinary as we rely on such knowledge, as Schafer states (2012, 96), “to use these insights in planning future environments for man.” Therefore, I came to the conclusion that I, as a soundscape researcher living in Fukushima during this important period of its history, must record the changing post-accident soundscapes and report them to others around the world. Thus, I started the Fukushima Soundscape Project, in which the changing soundscapes of Fukushima are recorded, and then these records are released through a website (Nagahata 2011–2013)². This project comprises one of the main parts of the Soundscape Project for Earthquake Disaster 3.11 (2011–2013), initiated by the Soundscape Association of Japan (SAJ).

This article outlines the Fukushima Soundscape Project and illustrates the symbolic soundscapes of Fukushima after the accident as recorded by the project.

About Fukushima City

Fukushima city is located in a basin in the northern part of the Fukushima prefecture about 40 km from the nearest sea. The population of the city is around 280,000; though it is the prefectural capital, it is only the third largest city and is not the business capital of Fukushima.

The city is famous for its flowers. In particular, cherry blossoms are quite famous; there are several popular cherry-blossom viewing sites and not only residents of the city but also visitors even from outside Fukushima prefecture visited the city to enjoy cherry-blossom viewing before the quake. Fukushima is also known as the “Fruit Kingdom.” Cherries, peaches, pears, grapes and apples are especially notable. There are many tourist farms where visitors can enjoy picking various fruits when they are in season, and many people annually came just for that purpose, including the most recent season before the quake. In the winter, ducks and swans come to stay in the city as their wintering habitat. Before the detection of the bird flu virus from a swan in Japan in 2008, swan-watching was also one of the popular seasonal traditions in Fukushima.

The people of Fukushima, a region endowed environmentally in the many ways outlined above, were very familiar with nature before the accident. For example, in spring we would enjoy viewing cherry blossoms and the appearance of fresh green trees and other plants. In autumn, we would enjoy watching autumn leaves, and also hold outdoor *Imoni* (miso soup with pork and taro) parties, especially at locations along the river.

Regarding the Great East Japan Earthquake, although Fukushima city is located in the Tohoku district, the most damaged area, the actual destruction to the city was quite localized and relatively minor. Moreover, there was no damage from the tsunami. Therefore, recov-

ery of lifelines (i.e., water service and electricity) occurred relatively early in the disaster areas. Because of this relatively rapid recovery, temporary shelters could then be provided for evacuees from the nuclear power plant accident (from within 30 km of the Fukushima Daiichi Nuclear Power Plant), and around 12,000 people were evacuated to the city (Mayor of Fukushima 2012). Fukushima University also provided temporary shelter.

However, Fukushima city received a very large amount of radioactive contamination, and thus became a highly contaminated area, as described in the introduction.

Outline of The Fukushima Soundscape Project

When I started the Fukushima Soundscape Project, I hoped that the soundscapes of Fukushima could help illustrate aspects of the actual circumstances which the people living in Fukushima (including myself) felt in our daily lives but about which the mass media didn't (or couldn't?) report. Moreover, I believed such soundscapes could become a clue for others to learn what a nuclear power plant accident actually meant to the sufferers: knowing is the first step to action. Thus, I decided that the main purpose of the project would be to let people all over the world know about the soundscapes of Fukushima after the accident, as well as how they had changed, and still continued to change. For this purpose, I decided that the records of the project would be released via a website as soon as possible, from the very beginning of the project.

I went to conduct my first field recordings on May 1, 2011; I was unable to begin this project earlier because I was one of the administration staff members of the temporary shelter provided by Fukushima University, which closed at the end of April 2012 (Nagahata 2012). Four sites were selected for the first field recordings: Iizaka Hot Springs, Kotori no Mori (Forest for Birds), Mt. Shinobu, and Shinhama Park. The first three sites had been very popular among Fukushima residents before the accident. The latter two sites became well known after the accident as "hot spots" (i.e., places where radiation dose levels are especially high); therefore, they are symbolic of the accident. Also, I was familiar with each site before the earthquake. To record the soundscapes of each site, sounds occurring at the sites were recorded with a digital recorder, and several photos were taken.

Since making those original recordings, I usually carry my digital recorder and digital camera with me to record soundscapes whenever I happen to come across characteristic soundscapes of Fukushima. Once I have recorded the soundscape of a certain site, I add the location to a list of fixed observation points. I have visited each fixed observation point at frequencies roughly corresponding to the speed of their changing soundscapes. However, in cases where I did not feel that there was any significant change from a previous recording, I did not record or release a subsequent recording. Thus, the soundscapes of 22 sites have been recorded, with 13 of them having been recorded repeatedly. The soundscapes recorded at those sites and subsequently released can be heard at the project's website, "Fukushima Soundscapes" (Nagahata 2011–2013).

Symbolic Soundscapes of Fukushima after the Disaster

Among the fixed observation points, there are several sites whose soundscapes are especially symbolic. In this section, three such symbolic soundscapes are described.

Kotori no Mori (Forest for Birds)

Kotori no Mori (in English, Forest for Birds) is a bird sanctuary located near the center of the city. This forest has been maintained as a *sato-yama*, a traditional community-based forest. In former days, the *sato-yama* environment was preserved through sustainable use practices of mountain resources and sufficient maintenance by the local



Fig. 1: *Kotori no Mori*. Photo by Koji Nagahata

community. Similarly, volunteers would routinely cut bottom weeds, sweep up fallen leaves, and produce charcoal from wood obtained in the forest. The purpose for maintaining the forest was to create an environment where people, animals, and plants could live harmoniously together. Prior to the earthquake, the forest's conservation group actively offered nature education activities, and a bird-watching society of Fukushima held regular bird-watching parties at Kotori no Mori. In addition, my colleagues and I sometimes offered environmental education workshops for school children. Not only the birds, but also the people of Fukushima loved this forest. In fact, the soundscape of this forest was selected as one of the "100 Soundscapes of Japan: Preserving Our Heritage" (Torigoe 1999) in 1996.

On May 1, 2011, I visited this forest for the first time since the earthquake. The date fell on a Sunday during Japan's Golden Week holidays. Before the earthquake, on such a holiday many people, including families with school children, would visit this forest to enjoy the fresh, green natural environment. In 2011, however, the only people I encountered there were the staff of the forest's nature center. At that time, many elementary schools and junior high schools restricted students from playing outdoors to protect them from radiation exposure.

In contrast to these changes in human activities, birds were chirping lively as usual for that particular time of year. According to a forest ranger, the number and variety of species of birds in the forest were unchanged from previous years. In addition, there was the lively croaking of frogs. As a result, the sounds heard in the forest at that time were full of the songs of birds and frogs. Contrary to the world described in Rachel Carson's *Silent Spring* (1962), where birds do not sing because of chemical pollution, it was the humans instead of birds that were not singing or speaking in the forest as a result of radioactive pollution.

During the summer of 2011, a hot spot was found at a memorial park next to Kotori no Mori; therefore, a notice on a poster board located in the parking area for visitors to both the forest and the memorial park instructed people to avoid staying in the forest longer than one hour per day. When I visited the forest on August 5, 2011, cicadas were singing very loudly. According to the forest ranger, no effects of radiation had been found on either birds or insects. As for humans, only a few workers trimmed the bottom weeds at the front entrance of the forest, and no children were present. Therefore, the forest's soundscape that summer was dominated by the sounds of cicadas and the songs of crows and other kinds of birds. When I was leaving the nature center after talking with the ranger and a forest staff member, I observed their reactions to a visit from a school-aged boy to the nature center. They both happily exclaimed, "What an unusual event! A boy has come to this forest!"

On May 26, 2012, the notice was still up in the parking area. The monitoring post installed by the Ministry of Education, Culture, Sports, Science and Technology showed that the radiation level was 1.65 $\mu\text{Sv/h}$; this is about 30 times higher than the level before the accident. But even in this situation, birds were still singing cheerfully as usual, and yet there were still no people talking or singing. The forest was so silent that one could actually hear military songs being broadcast from the nationalist party's political campaign cars about 1 km away from the forest. One year after the accident, humans, not birds, maintained their silence in the forest.

On August 5, 2012, the cicadas were singing loudly as expected, but I felt that the number of cicadas was a little lower than that of last year. The forest ranger said that he also felt the same. He related a story that he had heard that this phenomenon might be part of the aftermath of the radiation, but his personal diagnosis was different: the year 2012 was a leap year (with an extra month after May according to the lunar calendar), and it is known from ancient times that seasonal changes during leap years are quite different from usual years, and that there are explicit effects on living creatures. But of course it is difficult to make concrete conclusions about the cause of these changes without continued observation.

On the day of my visit, the monitoring post showed that the radiation level was 1.70 $\mu\text{Sv/h}$. According to the forest ranger, this forest had been excluded from the official targets of decontamination because Kotori no Mori is not classified as a park but a forest, and therefore there was no way to realistically reduce the radiation levels over the near term. Thus, visitors, and especially children, never returned to the forest. In this way, the state of human silence in the forest remained unchanged.

Mt. Shinobu



Fig. 2: *Mt. Shinobu*. Photo by Koji Nagahata

Mt. Shinobu, located near the city center, is famous for cherry blossoms, fresh greenery, and a bird watching spot. It is popular with local citizens, and especially nature lovers. Many environmental events, including official ones hosted by Fukushima city's environmental agency, had been held here before the earthquake. I had also hosted sound education workshops at least once every year. Mt. Shinobu was once regarded as a sacred mountain, and it is still the site for religious rituals.

On May 1, 2011, the greenery on the mountain was fresh and birds were singing cheerily as usual. However, no people were present to enjoy the new season, because one of the first hot spots in Fukushima city had been found in one of the parks on the mountain, and the news had spread to the citizens. As a result, the mountain's soundscape was dominated by birds and crows; no human voices could be

heard. Spring on this mountain was also a silent one in which humans instead of birds kept silent.

Decontamination work was conducted in early autumn 2011. Many older people (some of them volunteers) cut bottom weeds, swept up fallen leaves, and packed contaminated materials into large trash bags. The filled bags were then isolated from easily accessible places. However, these protective efforts did not achieve the desired results. According to an official monitoring post in a park on the mountain, the radiation level of the site was still around 1.2 $\mu\text{Sv/h}$ in January 2013 — about 25 times higher than the level before the disasters. The notice board still instructed people to limit their stay at the park to no more than one hour per day.

Although the sounds of crows and other birds appeared to be the same as before the quake, only a few people (mostly seniors) were observed walking or staying at parks on the mountain during this period. According to the city's environmental agency, all annual environmental events at Mt. Shinobu on 2012 were cancelled, and no events are planned for the immediate future.

Thus, the recent soundscape of this mountain can basically be characterized by the usual sounds of nature and the absence of human voices.

Some exceptional cases were observed, however. The traditional Dondo Yaki New Year's festival, in which ornaments are burned at shrines, was held in January 2012 at Gokoku Shrine, located on the mountain. While I was recording the soundscape of the festival (almost 30 minutes long) on January 8, several families, including some with children, were present, and there were always some visitors to be found around an open fire. Thus, the voices of children could be heard amidst the sounds of the open fire and the traditional festival music being broadcast. This was the first time I had heard children's voices on the mountain since the earthquake. The festival was held again in January 2013. The numbers of the visitors seemed to be more than that of 2012, when I visited to record on January 12. Moreover, I could hear children's voices more in 2013 than in 2012.

Another exception to the post-earthquake absence of people at Mt. Shinobu occurred during cherry-blossom viewing season in April. I visited the mountain for a fixed-point observation on April 25, 2012, a few days after the cherry blossoms on the mountain had fully bloomed, but still were beautiful. On that day, many people, but fewer than usual, were visiting the mountain to enjoy the cherry blossoms despite the fact that it was a weekday. Some people purchased food and drink from vendors who had set up stalls. In addition, five or six children played in the park where the monitoring post and the notice board were located, while their mothers enjoyed the cherry blossoms. The soundscape of the park at that time was dominated by children's voices and the songs of birds.

These exceptional cases suggest that the charm of seasonal traditions like festivals and cherry-blossom viewing was stronger than the fear of radiation for many people. This attitude may prevail because people stay outdoors just a few hours to enjoy each seasonal tradition, and therefore the additional exposure is thought to be negligible compared with the amount of daily exposure since the accident. It seems that residents in Fukushima are learning to adapt to scenarios that involve some radiation exposure.

Shinhama Park

Shinhama Park is located at the center of the city near City Hall. Workshops had often been held on its lawn, including my sound education workshops for school children. Before the earthquake, the park's playground equipment and wading pool were popular with children who lived within walking distance. My daughter loved this park, so I sometimes visited there with her on warm days. Before the quake, one could always hear children's voices on warm days. Unfortunately, the park was one of the first hot spots discovered in Fukushima city in late April 2011. This news spread quickly to the



Fig. 3: *Shinhama Park*. Photo by Koji Nagahata



Fig. 4: *Decontamination efforts*. Photo by Koji Nagahata

citizens of Fukushima, and the park instantly became infamous.

On May 1, 2011, when I visited the park for the first time since the earthquake, a man who appeared to be homeless was napping on a bench, and several chirping birds could be heard. The park was unnaturally quiet for this time of day, and its soundscape was dominated by the sounds of birds and distant traffic.

Decontamination work at this location lasted from mid-July to August 2011. The work was large-scale: removal of the lawn and topsoil with heavy machines, replacement of the sand in a sandbox, and the cleaning of the playground equipment, benches, and a rest facility with high pressure water jets. The soundscape of decontamination here was therefore not unlike that of a construction site being developed.

The decontamination work at Shinhama Park was a success to a certain degree; according to official documentation (Fukushima City Office 2011), the average radiation level on August 29, 2011, was 0.31 $\mu\text{Sv/h}$, and the reduction ratio was 86%. By June 2012, the monitoring post at the park identified the radiation level as only 0.25 $\mu\text{Sv/h}$, and by January 2013, the radiation level had dropped to 0.21 $\mu\text{Sv/h}$, although this level is still about four times higher than that before the accident.

Despite the decontamination and drop in radiation, however, children's voices did not return to the park. I visited this park at least once a month after the completion of the decontamination work, and the only people I met for some time were groundskeepers and adult passersby. It was not until a full year after the earthquake (March 11, 2012) that I heard children's voices for the first time following the disaster. On that fine day, two boys and a girl were having fun on the playground equipment under warm sunshine. The soundscape of the park at that time consisted of children's voices, the chirping of birds, and the cawing of crows.

Since then, it seemed that the warmer the days became, more and more children would play at the park throughout the spring of 2012. From that point forward, it seems that the soundscapes of the park have remained stable, although the number of children playing at the park appears still less than that before the accident.

Symbolic Sounds of Fukushima after the Disaster

In the previous section, I focused on those sites with characteristic soundscapes. In this section, I describe two new intrusive and symbolic sounds that can now be heard throughout Fukushima after the accident.

The Sound of Decontamination Works

As described above, the current radiation dose levels for most of the city are still estimated as exceeding annual public dose limits. To reduce the radiation levels to less than the annual public dose limits over the short term, decontamination works are necessary. The

Fukushima City Office has been administrating its local decontamination works. According to the city's municipal report (Fukushima City Office 2012), the immediate target of the decontamination work is to achieve less than 1 $\mu\text{Sv/h}$ (still higher than the public dose limits) throughout the city within two years.

The official decontamination projects started at public schools and kindergartens located in especially highly contaminated areas in May, 2011, and then were subsequently conducted at other schools, kindergartens, and nurseries one after another. The decontamination works at schools mainly involved the removal of contaminated soil from schoolyards. During such projects, the soundscapes of the schools were dominated by the sounds of heavy machinery. Those works finished at the end of August 2011.

The decontamination works at parks began July 2011. These park projects were very similar to the work done at Shinhama Park described above, and therefore the soundscapes of the parks were very similar to that of Shinhama Park during decontamination. The works at the parks still continue today.

Schools and parks are ubiquitous across the city, and therefore the sounds of decontamination projects involving heavy machinery can be heard all over the city.

In October 2011, the official decontamination works at residential areas began at the most contaminated area of the city, and now the works have progressed to the second-most contaminated area. These works consist of washing roofs and walls using high pressure water jets and brushes, cleaning gutters, cutting garden trees, and removing contaminated soil. By my estimation, it takes on average three or four days for washing and cleaning, and then another week for cutting trees and the removal of soil per household. In this case, the residents remain living in their houses while the work is performed. As a result, residents who stay or work at home, such as home-based workers, homemakers, and retired people must continue to hear these new, unfamiliar intrusive work sounds for almost two weeks.

Radioactive Level Report

The second new intrusive symbolic sound I have observed is the radioactive level reports broadcast on radio and television. During these broadcasts, the daily radiation levels for several locations in Fukushima prefecture are reported in a fashion similar to a weather report, such as "Fukushima, 0.6 $\mu\text{Sv/h}$. Koriyama, 0.6 $\mu\text{Sv/h}$..." These programs are broadcast by all radio and television stations in Fukushima prefecture.

Discussion

From the above observations and data, we can see that the outdoor soundscapes in Fukushima since March 11, 2011, have been characterized by a lack of human voices, especially those of children. This has been observed easily throughout Fukushima. In addition, natural sounds, such as the singing of birds, the cawing of crows, and the chirping of insects, have remained unchanged and represent another salient feature of the Fukushima soundscapes. These two features

create silent soundscapes which are in contrast with the soundscapes described in Rachel Carson's *Silent Spring* (1962). I name this kind of silence - "radioactive silence."

Radioactive silence may be defined as "the state of a lack of human sound from a certain soundscape caused by fear of radioactive exposure, although other sounds from nature exist as usual." Thus, we can say that radioactive silent soundscapes symbolize people's anxiety about the effects of radiation; this means that living within a radioactive silent soundscape does not promote a state of mental well-being. Furthermore, the restriction of outdoor activities (whether voluntarily or compulsory) limits social activities, and therefore it can cause the degradation of social well-being. In this way, radioactive silent soundscapes also symbolize a state of social "unwellness" among the residents of Fukushima.

In addition, the new intrusive symbolic sounds that have arisen after the accident also seem to be strongly linked with the anxiety people feel toward radiation. Here again, we can find that the soundscapes of Fukushima after the accident have been deeply characterized by anxiety.

Although the Japanese government, Fukushima prefectural authorities, and their advisors have repeatedly announced that "the current level of radiation has no immediate impact on health," people living in Fukushima are clearly not healthy according to the World Health Organization, which defines being healthy as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (World Health Organization 1946). The soundscapes of Fukushima symbolize states of unwellness in the daily lives of Fukushima residents. Moreover, we, the residents of Fukushima, feel that our daily lives are not in a state of well-being when we realize that we are living in such soundscapes. This then deteriorates our well-being further.

Here I pose some questions. Is it appropriate (i.e., fair and justice) that the government and local authorities be able to induce people in Fukushima to live within these soundscapes? Should people in Fukushima endure living there after such disasters? Is it justifiable that nuclear power plants are operated after we have learned that merely one severe accident can instantly make similarly unhealthy soundscapes for thousands of people?

Utilitarians or economic supremacists may answer "yes" to these questions underscoring that prejudice is limited. In fact, several Japanese business leaders have advocated that all nuclear power plants should be restarted immediately. However, there exists other standpoints from which we can object to such advocacy. For example, some might argue otherwise, "no," with the reason that "[justice] does not allow that the sacrifices imposed on a few are outweighed by the larger sum of advantages enjoyed by many" (Rawls 1971). From the standpoint of Schafer (1993), soundscape can be best understood from within its environment, among those immersed and living within those acoustic spaces. I believe we should take the latter view when answering these questions, and be supportive of the people actually facing the aftermath of the accident and possibly future accidents.

Final Remarks

The changing soundscapes of Fukushima following the earthquake of March 11, 2011, have well reflected the states of unwellness among those residents whose daily lives have been affected by radiation. Furthermore, living in such soundscapes is not healthy for residents. Once we know these facts, what should the soundscape community do, not only for the people of Fukushima but for all the people of the world, in such situations? — I think this is an urgent question for the entire soundscape community.

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Interferences Between Acoustic Communication Threads in Enclosed Social Environments of Istanbul

By Anıl Çamcı and Koray Erkan

Abstract

Various threads of acoustic communication emerge in enclosed social environments (e.g. cafés, pubs, concert venues). While their hierarchical order may vary based on the social occasion, these coexisting channels interfere with and condition each other. A primary strand which materializes amongst two or more individuals in a social space is that of verbal interaction. Another originates from recorded music playback in such venues; the music functions as an affordance of the establishment and conveys the mood of the place. Therefore, an acoustic communication thread, the main function of which is to moderate social behaviour, is formed between the environment and the individuals within it. A third avenue for acoustic communication within enclosed social environments can be traced between the live music performer and the audience at a concert venue.

This study aims at elaborating a real-world review of the aforementioned threads, and the interferences in-between, in the context of Istanbul's social life. Enclosed environments that range in social functions will be investigated as case studies; the communication processes that emerge within these spaces will be scrutinized through interviews and surveys with managers and customers, to portray the acoustic habitats of the given environments. This multi-perspective approach will allow us to reveal how differently these habitats impact social behaviour and whether the interference between two threads conditions the listening habits pertinent to a third one. Through these discussions, this paper will delineate a culturally idiosyncratic and modern view of social soundscapes in the city of Istanbul.

Introduction

Social environments within urban settings display ever-changing soundscapes. The acoustic characteristics of these soundscapes are predominantly determined by the activities of its inhabitants (Westerkamp 1991). The resulting sonic affordances of these environments play a substantial role in establishing the acoustic quality of a city experienced by its residents. Therefore, a feedback loop emerges between the behavioural idiosyncrasies of the city-dwellers and the acoustic habitat within which they reside. The continual presence of the lo-fi soundscapes and the steady increase in the levels of ambient noise (Schafer 1977, 186) condition the listening cultures cultivated by the modern city.

Within the context of urban life, music plays a significant role in forming social soundscapes and shaping the said listening cultures. Playback of recorded music and live performances by musicians are embedded and widely-accepted components of the acoustic communication that takes place in social environments. The well-documented behavioural and emotional effects of music (Hallam 2012) are being commonly utilized in social venues where the ubiquitous presence of music is effectively entrenched in our acoustic communication routines. In this article, we investigate the threads of acoustic communication in enclosed social environments by focusing on the city of Istanbul, Turkey as a case study. The city's historical background, the variety of cultures it nurtures, and its economic significance in Turkey's industrial infrastructure render Istanbul's social scene an especially chaotic — yet interesting — subject to study from a soundscape perspective, relying on a series of interviews and surveys¹. The survey was conducted with venue owners and customers, and bore multi-perspective and comprehensive insights into the public perception of Istanbul's social soundscapes, its "sensory anthropology" (Blessner and Salter 2007, 3), as well as the acoustic policies practiced by its local venues.

Soundscapes of Enclosed Social Environments

The acoustic experience of the city has the power to shape the habitual relationships we have to our environments; these relationships can bind or isolate the individuals that make up a community (Truax 2001, 13). The causalities between the acoustic composition of a city and the behavioural characteristics of its inhabitants render relevant acoustic ecology research, an immensely complex task. This current study undertakes a soundscape analysis of Istanbul by adopting a bottom-up approach, starting from smaller-scale components of the city. The authors of this article are both of musical backgrounds with years of experience in composition, sound design and performance, predominantly within the music scene of Istanbul. It was therefore an obvious choice to focus on enclosed social environments where soundscape considerations are inherently intertwined with musical policies. But prior to focusing on specific effects of music on acoustic communication and the overall perception of social soundscapes, we will first investigate some ontological perspectives regarding sound, such as "externality" and "coherence of noise," which surfaced as critical communication factors in our survey findings.

Other's noise

Numerous studies have shown that the "casual externality" of a noise determines the level to which we are cognitively annoyed by it regardless of its physical attributes: When one produces a similar type of noise as another individual, at the same or even higher levels, we subjectively evaluate the noise originating from the "other" to be more disturbing (Gloag 1980). This behavioural principal also applies to the collective self, as "we are more tolerant of noise produced by people from our own social group" (Davies et al. 2005). Accordingly, our surveys revealed that, in an individual's experience

of a social soundscape at a public establishment, “other customers’ noises” are found to be equally or more affecting than musical noise, and much more so than any other possible sound sources within or outside the venue, such as traffic and construction noises, TV or spoken radio broadcast within the venue, and noises leaking from neighbouring establishments.

We witness a similar attitude towards music played by other people as well (Kang 2007, 72; Thompson 2002, 149). Although

“ Soundscapes not only influence how we interpret our immediate environments but also how we communicate within them.

music diffusion may not be particularly inappropriate for a certain environment, the fact that it is being projected under someone else’s licence renders it more likely to be evaluated as noise. In the context of an enclosed social environment where customers principally submit to the policies of the venue simply by choosing to go there, we have observed the concept of “genre” emerges in our survey results as a key factor in the demarcation of the “acoustic self” and the “other.” A large portion of the participants specified the genre of the music played at a venue as the primary reason for preferring to frequent that particular location. In this way, the customer acquires a sense of acoustic ownership, or “spatial ownership” (Blessner and Salter 2008) which induces a loyalty towards the venue to the extent of considering excessive levels of loudness acceptable.

Functional coherence of social soundscapes

The music dominating the auditory space of a venue is not always a welcome trait for the customers. Both surveys and interviews revealed that the pleasantness of the constituent sounds of a venue’s acoustic habitat relies heavily upon whether they maintain a “functional coherence” with the space. For example, loud music, which was frequently listed as an undesirable acoustic affordance for restaurants, was mainly found to be an “appealing” feature for concert halls and night clubs; ironically, the latter also surfaced as the most avoided venue due to its soundscape characteristics. It should be noted here that no sound level regulations are being applied for the indoor areas of the venues in Istanbul, provided that customers are forewarned about possible hearing hazards. What is being regulated, however, is the level of the sound leaking out from the venue, which at no time should raise the average environmental noise level more than 10 dBA (e.Mevzuat 2012).

Acoustic Communication Threads in Enclosed Social Environments

Soundscapes not only influence how we interpret our immediate environments but also how we communicate within them. Acoustic communication, as Truax (2001, xviii) explains it, studies “the interlocking behaviour of sound, the listener and the environment as a system of relationships (...).” He describes the three major systems of acoustic communication as speech, music and soundscape (2001, 43). Congruently, while developing the theoretical framework of this research, we have specified a customer-venue-musician trichotomy which plays a pivotal role in the formation of soundscapes within enclosed social environments. Studying the interactions amongst

the components of this trichotomy, we have delineated three threads of acoustic communication.

Customer-customer thread (CC)

A main function of social gatherings is verbal communication. Therefore, we commonly observe the emergence of an acoustic communication thread, which is at times enhanced by bodily gestures, between two or more people inhabiting a social space. The predominance of the customer-customer thread within the soundscape of a venue is dependent on the venue’s function. However, regardless of this function, the “CC thread” is omnipresent, albeit at varying ranks within the communication hierarchy.

Venue-customer thread (VC)

The venue-customer thread is formulated from an ecological perspective by drawing from Gibson’s model of “affordances.” An affordance is described as “the quality of an object or an environment” which allows for action possibilities (Gibson 1986). Within the conceptual framework of this study, we will describe the acoustic output of a venue as an affordance of the environment which yields for the customers, the action possibilities of hearing and listening. Although the acoustic affordance of a venue may also include maintenance/staff noises and sounds leaking from outside, our surveys and interviews reveal “music projection” as the foremost acoustic output of a venue. This affordance has been described, both by managers and customers, as establishing the “character” of the space.

Musician-customer thread (MC)

A third notable strand emerges between the live performer and the customers inhabiting the concert space. It goes without saying that, while the first two threads are relevant for almost every venue regardless of its function, not every establishment provides a platform for live performances. However, since this research investigates the formation of listening cultures as a result of interferences between the listed acoustic communication threads, it is necessary to study these relationships across different venues with varying functions. It should be noted that the musician-customer thread is assumed to emerge only within the context of a “performance,” where this function is made clear to the customers. Therefore, a musical affordance of a venue that is not specified as a performance, whether it is DJ’d or played-back from an automated system, is not considered to motivate an “MC thread” but rather establishes a “VC thread.”

Case Studies: Three Venues in Istanbul

We have conducted interviews with the managers of three venues in Istanbul so as to establish an understanding of the intercorrelations between the acoustic policies these venues adopt and the customer perception of the resulting soundscapes as portrayed in our survey results. All of the venues listed below are located at the social entertainment center of the city and they target young adults of ages between 18 and 25, which has been consistently described by our interviewees as a phase of “financial imprudence.”

Venue with music-playback

Venues with music-playback, such as restaurants, cafés and pubs, represent the majority of enclosed social environments in Istanbul. The specific venue we chose for this study is named “Joker.” Within its relatively short history of 10 years, “Joker” has managed to establish a substantial popularity amongst college students. “Joker” fulfills café, bar and dance club functions throughout the consecutive periods of the day. We interviewed the venue’s owner and manager, Volkan Tangör. The two predominant threads of acoustic communication at “Joker” are the “VC” and the “CC threads.” The main mediator of the “VC thread” is music-playback which dynamically and stylistically

cally evolves throughout the day from popular indie music to dance music. It should be noted that “Joker” does not boast a particularly high-end sound system or any engineered acoustic design.

One of the most significant findings of the interview was that music at “Joker” was considered the main vehicle of control over the customers. Tangör has developed heuristic strategies in this domain over the course of years; some of these strategies, as will be further discussed in this and coming sections, show notable consistencies with the theoretical and experiment-based findings of previous research on behavioural effects of music (Guéguen et al. 2008). The venue’s primary source of income is alcohol sales. Tangör describes how changing musical strategies can as much as double these sales. He claims that the volume of the music needs to be gradually increased throughout the day in congruence with customer behaviour; this, he believes, rejuvenates the soundscape of the environment and induces a fresh perception of the venue. Here, we observe a clear concordance with Blesser’s concept of “altered states of consciousness,” which explains that the energy transmitted to the customers through loudness of the music psychologically transports them to another place (Blesser 2007). This spatial rejuvenation, in return, maintains that a customer can inhabit the venue for extended periods of time and therefore consume more alcohol. Tangör admits that customers arriving at a much later period of the evening find the music to be extremely loud while customers who have been gradually accustomed to this peak loudness do not necessarily find it disturbing. However, as the night proceeds with more customers arriving, increasing the loudness becomes more of a necessity than a strategy, due to higher levels of sound absorption.

Another significant role of the music-driven “VC thread” at “Joker” is inducing familiarity and therefore a sense of loyalty towards the venue. Tangör explains that people tend to refresh their drinks when they are cued with what he calls “key songs,” prompting this familiarity. The effects of music are not always immediate: certain pieces imply “a promise of fun” during daytime when music generally serves a background function for the “CC thread.” However, throughout the evening, musical style and volume evolves so as to allow Tangör to gain “spatial ownership:” “Otherwise, I am not in charge of the venue,” he explains. While dancing impedes alcohol sales, this corporeal experience of the soundscape ingrains a memory of entertainment and encourages future attendance.

Live music venue

The live music venue chosen for this study is one of Istanbul’s foremost concert spaces, “Babylon.” Having been in business for over 13 years, “Babylon” has managed to gain a strong public identity as a high profile live music establishment which hosts a significant portion of the concerts by foreign acts in Istanbul. Our correspondent was “Babylon’s” booking manager Barış Başaran who has described his duty as being in charge of every aspect of the concert experience at the venue. Live music is the primary, and for the most part, only affordance of “Babylon.” Therefore, the “MC thread” dominates the experience of the venue. Their ideal customer is the music listener whose main incentive to visit the venue is to witness a live performance rather than socialize through “CC threads.” The venue does not necessarily rely on alcohol sales since it hosts ticketed events, and the peak hours of operation are rather early, between 21:00 and 23:00. Başaran does point out that listening behaviours change through the night with alcohol consumption. However, he goes on to explicate that this has mainly to do with what a performance demands, and furthermore, allows. In other words, alcohol sales are not causal factors but rather outcomes; indicators of whether a given performance was a rousing success or not. The musical strategies at “Babylon” are meticulously calculated: “No message given via the music is at random.” Başaran believes that the acoustic quality of the venue and the stylistic make of its soundscape are of utmost impor-

tance, much more so than the physical being of the establishment.

The “MC thread,” in his opinion, necessitates a good sound engineer and a well-thought-out acoustic design without any compromises: “The sound needs to be strong.” However, strength of sound, as he explains it, is not simply a function of loudness or other discrete parameters, but the product of what a specific genre stipulates from a gestalt understanding of sound. When asked about the broader context of night life and other venues in Istanbul, Başaran explains that most of the enterprises are unable to cultivate a venue-specific culture and the resulting lack of a consistent following impedes long term financial stability. “Babylon,” in this sense, is considered one of the fringe cases. However, “Babylon” too, is highly affected by the recent social transformations in its particular neighborhood as the region becomes more populated and more vibrant by the year. Strategies developed to adapt to this evolution and to rectify possible discrepancies between the function of the venue and the emerging listening cultures will be discussed in the following sections.

Hybrid venue

Hybrid venues which offer both recorded music playback and live music are also fairly common in Istanbul. These venues are home to “VC” and “MC threads,” either at discrete periods of the day or simultaneously, provided that the architecture of the space allows for it. The specific venue chosen to fulfill our study under this category is called “Peyote,” which is one of the earliest hybrid establishments in its region, having survived through several drastic transformations. In its current state, which has been established over the past 6 years, “Peyote” boasts a three-story structure with a live music/DJ performance/dancing area on the first floor; a second and main live music hall on the second floor; and a pub with a terrace on the third floor. The venue operates 12 hours a day with peak hours between 22:00 to 02:00 during which all three floors function simultaneously. For this interview, our correspondent was Emre Ersoy, who has been co-managing the musical operations at “Peyote” on a daily basis for the past 6 years.

“Peyote’s” second floor concert space is considered the ultimate venue for local indie acts in Istanbul. Ersoy explains that “Peyote’s” main policy is to make people listen to music by promoting it as a lifestyle. This mentality has gained “Peyote” a strong public perception to the extent where visiting the venue has almost touristic traits for people who do not necessarily fit into this reputed lifestyle. Even on its third floor, where the “CC thread” takes precedence over the “VC thread,” the music is not considered a background element. The choices of played-back music and the bands they host ultimately define “Peyote.” The venue’s soundscape, as an outcome of these choices, is its foremost product. Interestingly, “Peyote’s” customer base is mostly composed of the members of the bands they host and their social circles, a fact which almost renders the product and the customer at “Peyote” as one and the same.

There are no strictly calculated acoustic designs on either floors of the venue but the bands and the sound engineers are so accustomed to the acoustic shortcomings of the concert spaces that they can utilize them to their advantage. Sound leakage between floors is not a particular issue as the architecture of the building naturally isolates the floors from one another, and what little leakage may happen is welcome due to its implication of vibrance and multi-functionality throughout the venue. Further perspectives regarding “Peyote’s” acoustic strategies are provided in the coming section.

Interferences Between Acoustic Communication Threads

VC-CC Interference

As previously mentioned, music playback at a venue constitutes the main instigator of the “VC thread” but the foremost inhibitor of

the “CC thread.” Managers of the venues that utilize recorded music playback have different perspectives towards this type of interference; for “Joker,” the music can serve a background function during the day, leaving an acoustic space for the “CC thread.” However, later in the evening, the “CC thread” is not particularly welcome, since “people drink less while talking.” Therefore, Tangör deliberately interferes with the “CC thread” to assume the “spatial ownership” of the venue and isolate the customers from their social groups. He explains that if the music does not overpower the dialogue amongst customers, he loses control of the soundscape and therefore that of the venue. While new customers may react against this interference, they get familiar with the venue’s varying acoustic characteristics for the different intervals of the day and either attend accordingly or get subjected to a gradual acoustic acculturation and adapt to its soundscape.

“Peyote,” on the other hand, prioritizes the “CC thread” on its third floor while promoting a strong “VC-CC interference” on the first floor. The music played-back on the third floor, although

““ With the rapid transformations in Istanbul’s economic and social fabrics over the last few decades, there have been strong cultural shifts between consecutive generations . . . the new generation has lost contact with the musical heritage and the listening manners of the previous eras.

being selected through a highly stylistic filter to serve a foreground function, is intended for “nurturing the effects of socialization and alcohol” as Ersoy puts it. In the cases when strong negative feedback is received from customers due to “VC-CC interference,” not the style but the loudness of the music is adjusted. Since music at “Peyote,” as a “soundmark” (Schafer 1977, 10), establishes the identity of the venue, they prefer to try to persuade the customers through dialogue, rather than submitting to their stylistic complaints. The “VC-CC interference” is considered a tool to support this imposition. Once the customers’ attention is shifted from the “CC thread” to the “VC thread,” they are observed to display a more vibrant mental participation to the soundscape. This, at times, leads to a feedback loop between the customers and the venue, in which the DJs start pushing the envelope of stylistic marginality of the music to the extent where the customers get aurally exhausted.

Ersoy, who also occasionally spins the music on the third floor, explains that the “VC-CC interference” renders him especially self-conscious of his actions as a DJ: “I start to overly worry about the loudness and the spectral balance of the music” which he reports as causing him considerable mental labor and elongation of the perceived time. A recent upgrade to the third floor sound system at “Peyote” has supposedly expanded the repertoire of music the DJs are able to play, since this higher resolution system can better reflect complex musical textures. This surge in the intelligibility of music also improved the “VC threads” capacity to interfere with the “CC thread,” as they have been observing more attentive listening amongst the third floor customers since the upgrade.

CC-MC Interference

Seventy-one percent of the participants (n =248) who took the survey described the negative effects of other customers’ noises at a concert situation to be “average” to “much.” This, alongside the

report from venue owners, highlights the “CC-MC interference” as a pronounced phenomena at live music venues. If the customers themselves commonly describe this type of interference to be undesired, how does it remain to be such a prevalent issue?

In the case of “Peyote,” we observed a functional obfuscation of the concert space. Many customers of the venue travel between the floors throughout the evening, exploring different entertainment possibilities. Since the other two floors of this hybrid venue serve mostly social functions, sounds emanating from customer behaviour leak into the concert space. Although the managers believe that the “MC thread” on the second floor should be of prime importance in an ideal situation, they are not in favor of adopting a domineering policy to impede the acoustic communication amongst customers which is considered an organic component of the venue’s soundscape.

At “Babylon,” however, the “CC-MC interference” is contextualized from an entirely different perspective. Since the sole function of the venue is to host live performances, the “CC thread” directly contradicts with the experience that the managers rigorously labor to design. The evaluation of this matter from the viewpoint of the musician has strong implications as well. As Başaran explains, focused and attentive audiences alter the musicians’ performance greatly, which in turn enhances the overall experience at both ends of the “MC thread.” The contrary situation not only negatively impacts the concert but also damages “Babylon’s” global reputation when certain foreign acts and their managers who have access to larger talent networks become hesitant to book future events.

To rectify such negative effects of the “CC-MC interference,” the venue “Babylon” established a “silent concert” policy in 2010, at a time when the steady increase in this interference had reached a point where certain acts almost walked off the stage due to customer noises. The policy is applied to concerts that are expected to exhibit a high dynamic range and necessitate, at times, a particularly quiet environment. Whether the venue for a particular concert will adhere to this policy is declared in press releases in advance; it is also announced right before the concert that customers who do not follow the policy will be asked to leave the venue.

“We are yet to be forced to ask anyone out,” tells Başaran, explaining that administering this policy should not have been necessary in the first place but it has been greatly successful and the customer attentiveness from the earlier days of “Babylon” has been largely reinstated. “We are helping our customers to regain their capacity to remain silent during a concert,” he says.

For the events that are not labeled “silent concert,” there still remain measures to address the “CC-MC interference.” In our brief discussion with “Babylon’s” head sound engineer, he stated that the music should overpower the overall volume of the audience at all times. He, therefore, actively moderates the overall volume of a performance within the amplitude limits permitted by the specific genre in order to mask the customer noises. He observes this masking effect to shift the attention of a considerable portion of the audience back to music immediately.

Başaran sees the deterioration in listening cultures, which necessitates such policies, an intrinsically socio-cultural phenomenon. With the rapid transformations in Istanbul’s economic and social fabrics over the last few decades, there have been strong cultural shifts between consecutive generations. He believes that the new generation has lost contact with the musical heritage and the listening manners of the previous eras; he partly puts the blame on a possible devaluation of music perpetrated by the internet. A similar sentiment was also expressed by Ersoy regarding customers of “Peyote.” In his opinion, the massive access to music via the internet has led to an over-consumption of the art form which in return has eroded the public appetite towards music and bred a “less-sensitive” listening culture.

(VC-CC)-MC Interference

While formulating the acoustic communication threads pertinent to enclosed social environments, we have hypothesized that interferences that emerge between particular threads could influence the acoustic communication routines of an external thread. The interviews have indeed illuminated such possibility with the managers of two venues separately underlining how the acoustic strategies of venues that utilize recorded music might be externally conditioning the listening habits in concert situations.

To explain this phenomenon, Başaran situates Istanbul's social life in a global context. He describes that there can be found a variety of social venues that offer soundscapes of different dynamic ranges in most European countries. However, a significant portion of the venues in Istanbul exercise the "VC thread" above a certain volume threshold, which establishes an "automatism." Başaran refers to it as, "talking loudly," which is a common defense against obstruction of verbal communication due to loud music (Rohrmann 2008), and consequently becomes a behavioural norm. "People got conditioned to speak at high decibels and we need to raise an awareness to interrupt this habit," he emphasizes. This "automatism" resonates in the concert hall to the detriment of the performance. Similarly, Ersoy recounts regularly observing audience members who react to live performances in a similar fashion to how they would behave at a bar in the presence of loud music playback. He explains that this leads to a "perceptual deviation" that accentuates a stark contrast between the function of a concert venue and the prevalent listening habits.

Referring to modern music mastering standards, Rodgers states that by over-compressing and therefore ridding the music from its dynamic tensions, "we've made it truly a background object" (Rodgers 2009). Similarly, we can speculate that the acoustic strategies exercised by venues in Istanbul rendered music in social contexts as "no longer a listening object." The customers develop not a physiological but a "cognitive deafness" towards music which becomes evident in the concert space as a sign of the deterioration in "concentrated listening" (Schafer 1977, 117) which was historically made possible by the concert hall in the first place.

Conclusion

Current research has yielded various perspectives towards the characteristics of acoustic communication in enclosed social environments of Istanbul. While some of the survey findings of this study coincide with similar research conducted in other parts of the world (as cited above), coupling of these deductions with the analyses of the interviews with venue managers has given us a broader understanding of the reciprocal relationships between customer behaviours and soundscape policies. This inspection of the interferences between acoustic communication threads and the resulting listening cultures idiosyncratic to Istanbul constitutes merely a first step in unraveling the complex dynamics of the city's soundscape. Future work will involve further field studies and surveys combined with an investigation of casual listening habits outside of social contexts in order to reveal possible external sources of interference that influence our acoustic communication routines.

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Endnotes

1. Surveys were conducted via the web in the year of 2012 with 248 participants.

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GPS Sound Walks, Ecotones and Edge Species Experiencing Sound within Teri Rueb's Mobile Metaphor

By Frauke Behrendt

Preface

Inspired by sound studies, mobile media studies and ecology, this article introduces an alternative way of framing mobile listening experiences by understanding mobile media as an edge species, a term borrowed from ecology. If we conceptualize mobile media as edge species - spending time in junctions between the techno-ecosystem of our cities and the natural ecosystem of our countryside and landscapes - this opens up a discussion around how mobile networked devices allow us to connect to rather than isolate us from our surroundings. The metaphors of the ecotone, the edge effect, and edge species open up a new way of thinking about those areas where humans, mobile media, and landscapes increasingly co-exist. Despite the carbon footprint of mobile phones, smart phones and other mobile devices, I argue that the 'mobile media use' we observe in GPS sound walks have the potential to re-connect people with "natural ecosystems," especially when we consider the auditory dimensions of the experience and how walking operates as remixing.

Ecotone Between Island and Mobile Media

Eugene P. Odum (1971, 157), one of the pioneers of ecosystem ecology, defines the edge effect as taking place in ecotone areas, a transition zone between several animal communities. "An ecotone," according to Odum, is "a transition between two or more diverse communities [or, rather: community areas] such as between forest and grassland or between a soft bottom and hard bottom marine community." Think of it as "a junction zone or tension belt which may have considerable linear extent but is narrower than the adjoining community areas themselves." Within the ecotonal community, many organisms from each of the overlapping communities commonly co-exist, along with "organisms which are characteristic of and often restricted to the ecotone. Often, both the number of species and the population density of some of the species are greater in the ecotone than in the communities flanking it." The edge effect can be simplified as "the tendency for increased variety and density at community junctions."

If we borrow this concept loosely, we could think of mobile media as one community area. 'Species' in this ecosystem would include GPS and communications satellites, mobile phone masts, mobile devices, network signals, and all other infrastructure related to (for example) making smartphones work. We can then think of 'Spectacle Island' - a national park island in Boston and the location of the GPS sound walk in this discussion — as another community area that has a variety of organisms including shrubs, grass, birds, insects and small mammals. The transition zone between these two community areas, the mobile media community and the island community, could then be understood as an ecotone. The ecotone comes into existence by people using mobile media while visiting the island; it has organisms from both communities. Visitors might be using their

mobile phones to make a phone call, to look up the island's history online, to post photos online or to inform friends and family about their visit via social media. They might also be taking part in Teri Rueb's GPS sound walk 'Core Sample.' In all these scenarios, both the island and the mobile media make up an ecotone, or what is sometimes called 'hybrid space.'

Odum further explains that "organisms which occur primarily or most abundantly or spend the greatest amount of time in junctions between communities are often called 'edge' species" (1971, 158). Mobile media activities such as phoning or using social media can then be understood as examples of edge species — they thrive at the intersection of being on the island and having mobile media infrastructure available. The GPS soundwalk discussed in this article is another example of an edge species thriving in this particular ecotone.

Odum's concept has been questioned in the field of ecology (see Klein 1990, 91–92) but without going into the detail of this debate, I would like to suggest a more metaphorical understanding of the ecotone concept that assists the analysis of cultural, media and social issues in the contemporary context (see also Sennett 2009). The use of mobile media in the countryside is often discussed in negative ways, as a symptom of how we become increasingly disconnected with our environment 'even when out in nature.' Rather than thinking of one type of species invading another territory (mobile devices invading the countryside), I would like to propose that there is a fertile area that exists between natural communities (including those modified by man) and mobile media communities: an ecotone. This ecotone hosts edge species (that are characteristic of, and potentially restricted to this ecotone), and I suggest thinking of Rueb's GPS sound walk 'Core Sample' as one of these edge species. However, it is important to understand the discussion around edge species and edge effects in media as inspired by, rather than as a direct translation of this concept from ecology.

Media experiences traditionally tended to take place in domestic contexts (Silverstone & Hirsch 1992), and in urban environments (Gordon & Silva 2011), or in what Odum calls 'techno-ecosystems' that "involve new, powerful energy sources (fossil and atomic fuels), technology, money, and cities that have little or no parallels in nature" (2001, 137). With the increasing portability of media devices and the proliferation of wireless networks over the last few decades, media usage has spilled out into all parts of our urban environment. Increasingly, mobile media are also used less directly in urban environments, such as national parks and areas that we use for recreation or work (such as hiking trails or farm fields). Humans without mobile media (such as mobile phones or GPS) become increasingly rare, wherever they are or go. Odum urges us to be more pro-active towards making the 'techno-ecosystem' and the natural ecosystems co-evolve, in contrast to the current 'parasite-host system:' "It is

imperative that the fuel-powered techno-ecosystems interface with the solar-powered natural ecosystems in a more positive or mutualistic manner than is now the case, if urban-industrial society is to survive in a finite world” (2001, 137–8).

Mobile phones and other portable media devices are of course fossil-fuelled themselves: their production, batteries and the infrastructure behind them (mobile phone networks, GPS satellites, etc.) all carry a heavy carbon footprint. There are more recent efforts to design them in more sustainable ways and to combine them with solar power, such are hopefully a step towards a more mutualistic interface between natural ecosystems and mobile media. We can conceptualize Rueb’s ‘Core Sample’ as a model of a mobile media use where symptoms of the techno-ecosystem (e.g. mobile phones) interface with natural ecosystems (e.g. an island) in a mutualistic way. The mobile media (techno-ecosystem) use we observe in sound walks like Rueb’s actually has the potential to (re-)connect people with “natural ecosystems,” rather than alienating them further, as I will argue later in this article.

A GPS Soundwalk as an Example of an Edge Species

Rueb’s ‘Core Sample’ is one example of the GPS genre of sound walks (Rueb n.d.). To experience a GPS sound walk, the audience walks around in a predefined area, using headphones (or earphones) to listen to sounds that have been connected to specific locations in this area. GPS sound walks could be described as geo-tagging with audio files that are triggered as soon as participants enter a specific zone, or they could also be understood as geo-curated soundtracks for specific locations. They are part of a rich history of mobile and locative sound art practices (with and without media) and the field of GPS sound walks in particular has developed since the late 1990s including several sub-genres with historic, narrative and experimental works (see Behrendt 2004, 2010). Rueb has been one of the pioneers of this area and has a growing portfolio of critical practice in this genre.

Her 2007 work ‘Core Sample’ is a GPS sound walk situated on one of Boston’s Harbour Islands (Spectacle Island, see figure 1). Visitors reach the national park island by ferry. The Institute for Contemporary Art (ICA) Boston that commissioned the piece describes it as “interactive sound walk” where visitors are invited to “[b]orrow headphones from the Island’s Visitor Center and then roam the island to experience a landscape of sounds activated by GPS (...). Discover unique combinations of natural and processed sounds - that correspond to the Spectacle’s many subterranean layers, as well as its present soundscape” (ICA Boston 2007, 5).

Sounds corresponding to specific historic periods of the island are mapped onto its geographical elevation profile with sounds relating to periods further from the past at sea level, and sounds relating to more recent times mapped to the tops of the hills. Visitors walk the island’s path system with a ‘Core Sample’ map where different colours represent the elevation levels and sound zones: “Atmosphere, plantings, top soil/loam, central artery fill, modern landfill, settlement and industry 17th-21st century, native american landfill 500–1580, geologic core” (ICA Boston 2007, 6). These sounds are specifically recorded for the piece and include atmospheric and experimental sounds as well as narrative fragments from interviews the artist conducted with people connected to the island and its past.

As ‘Core Sample’ is a site-specific piece, some understanding of this landscape is vital to contextualize the audience experience of the piece. The island has a varied history: after being used as a dump for toxic material, it had been closed to the public for decades but has now been turned into a national park by covering it with soil from the ‘big dig’ (a huge tunnel project) in Boston. The exhibition booklet summarizes the island’s history: “Spectacle has been home

to casinos and hotels, a horse rendering plant, city dumping, and to families who lived and worked on the island. Now active parkland, Spectacle’s two prominent man-made drumlins were shaped with excavated material from Boston’s ‘Big Dig’ and planted with 28,000 trees, shrubs and grasses” (ICA Boston 2007, 5).

In an interview I conducted with Rueb, the artist explains that ‘Core Sample’ is an artwork concerned with “a theme around margin and edge and outcast.” Following on from her detailed research and interviews with residents and experts about the island and its history, the artist states:

It is also a dearly loved island. It means a lot of different things to many different people. And the former residents, for the most part describe it as an idyllic landscape. There was always the dump. You [referring to my experience of the piece] heard that edge quality in the landfill section. That was not considered the island. That was just known as ‘the other side’ where the trash went. Residents lived on ‘the island’.

The ‘edge’ theme and the ‘edgy sounds’ mentioned by the artist resonate in interesting ways with the concept of ‘edge species’ suggested here by the author. To experience the piece, and the “edge” sounds the artist mentions (these sounds are electronic textures mixed with recordings of trash trucks), participants borrow a small GPS-enabled PDA (remember: this is pre-smartphone era) with headphones and explore the path system of the island by walking up and down two hills. Depending on their location they hear specific sounds that are related to the island’s past and present, including abstract sounds, historic radio snippets, voices of former residents, and many more. I argue that the intersection of mobile media and the existing island landscape could be understood as an ecotone, where the edge species ‘GPS sound walk’ is an example of how a high density and variety of organisms can occur in these areas (just think of all the apps we now use on our smartphones) - the edge effect. We are in the physical space of walking the island, but we are also in the mobile media space designed by the artist as we listen to the curated sounds alongside the island’s soundscape. Both listening and walking operate as interface for exploring the ecotone. They operate in tandem but it is useful to now consider each of them in detail.

Experiencing The Ecotone Through Listening

If we understand the GPS sound walk ‘Core Sample’ as an edge species, then listening to the piece could be conceptualized as a way of exploring the ecotone that forms at the intersection of the island and the mobile media infrastructure. Sound’s relation to space and time is different to the visual world of objects we see with our eyes. Sound as an “object of sensual perception [...] differs fundamentally from visible and tangible things that can be grasped from a distance as discrete objects” (Loock 2005, 89). We are immersed in sound. If we look at objects we perceive space as being empty, only being “decorated” with objects. But actually the invisible, see-through space is full of sounds, and we are surrounded by it. “The eye creates distance; the ear puts us at the centre of a dynamic energy-filled realm. In our visual culture, space seems like an empty box,” as Bernd Schulz puts it (2002, 15). In a paragraph about the difference between oral and literary cultures, Walter Ong makes a similar argument: “Sound situates man in the middle of actuality and in simultaneity, whereas vision situates man in front of things and in sequentiality” (2000, 128). Listening to the sounds of an GPS sound walk places us in the middle, for we experience the sound of the techno-ecosystem through the headphones while we can still hear the soundscape of the natural ecosystem. We are in the middle of both systems, an edge species in an ecotone, where the sound highlights our presence within rather than at a distance.



Figure 1: Impression from experiencing 'Core Sample' by Rueb (2007): headphones and PDA, exhibition booklet, view from 'Spectacle Island' toward the Boston Skyline. Photo by Frauke Behrendt

We are not able to shut our ears as we can do with our eyes, but at the same time we have a well-developed ability to block out unwanted sounds. We can focus our attention towards certain sounds and shift our attention between foreground and background sounds for example, either listening to the person next to us in a noisy cafe or to the music played in the venue - the so-called 'cocktail party effect.' At other times it seems impossible to shift our attention away from a sound that is annoying us, a clock ticking at night, for example. Sound artists often engage with this economy of acoustic attention, for example by aiming to shift our hearing towards specific sounds or all sounds. Bassett (2003) observes that when making a mobile phone call, we tend to prioritize the auditory space of engaging with mobile media over the visual space of our physical environment. This economy of auditory attention operates slightly different when engaging with the GPS sound walk 'Core Sample' as the sounds we listen to are relevant to the actual physical environment — whereas a phone call tends to be separate from it. 'Core Sample' draws the audience in, shifting its attention between the soundscape (see Schafer 1993) as the artist and/or participant overlays onto the location and the existing soundscape of the island. One soundscape is that of the natural ecosystem, and the other one is derived from the techno-ecosystem — with the audience exploring the ecotone between them; the mobile device used for listening is the edge species.

When experiencing 'Core Sample,' we might be absorbed in the sound on the headphones to the point where we almost forget our surroundings (like getting lost in music), as happened to me at one

point where I did not even realize I lost my jacket on the island's path. At other times, the sound makes us pay attention to our surroundings and the island's soundscape, especially as many of the pieces' sounds are recordings from the very soundscape of the island. This analysis of auditory attention in GPS sound walks challenges the common argument that headphone listening disconnects you from your physical surroundings suggesting that one would only pay attention to the sounds on the headphones and not to the wider soundscape. However, participants listen to both — the sounds on the headphones and the wider soundscape, negotiated by their shifting sensory attention. This is not only the case for sound art, but also for everyday headphone listening (see Bull 2007).

In this case study, listening actually connects us to the landscape and not 'just' to the mobile media. When participants experience this particular edge species through listening and walking, the GPS walk connects them to the ecotone that is made up of the island and the mobile media infrastructure. Most discussions around networked and mobile media use are largely focused on a visual analysis, where for example using mobile phones is all about interacting with screens. The ecological concepts of ecotone and edges species in conjunction with a sound studies perspective have allowed a broadening of this analysis. Because of increasing mobility, screens are becoming more and more impractical for interaction on the move. We rarely stare at the screen motionless anymore (as we used to do in the era of desktop internet access) but we are embedded in technology, carrying a potential and actual bubble of connectivity with us, a condition that sounds very familiar to the above discussion of sonic experience

(see also Dyson 2009). I argue that the embedded and immersive nature of 24/7 mobile media experience is much more suitable for a critical analysis from a sound studies perspective. While sound studies perspectives are often critical of media (and headphone) use, especially in the countryside, media studies analyses are often focused on screens. By bringing both together, this article develops a 'sound' conceptual framework for understanding contemporary mobile media experiences, inspired by an ecological perspective.

Experience the Ecotone Through Walking

Listening is a key aspect of experiencing an GPS sound walk, of exploring this media/landscape ecotone, but walking is equally as important in this process (see also Behrendt 2012). The different sounds of 'Core Sample' are distributed across the island's topography and in order to explore these sounds participants need to explore the island on foot (however, the path system is also accessible for those with alternative mobility needs); they need to walk from sound to sound. Participants create their own version of the piece, depending on the route chosen and the time spent with the piece (see also Hight 2006). Each person participating in a GPS sound walk creates a unique remix of the piece. Here, the scale of traditional remixing with vinyl is extended to the scale of the island, where the path system could be likened to the grooves of the vinyl, the mobile device corresponds to the pickup, and the GPS sound walker selects the sample (and its order) by walking a certain 'groove' and the speed of walking moderates how long they can hear each sample (to a certain extent). The GPS sound walk remix is created through walking and listening, a media practice that connects.

Walking and Listening to Experience the Ecotone, To Connect

There are similarities between the discourses on mediated listening and mediated walking — both typically see mobile media as an intrusion and argue that using mobile media while walking/listening disconnects us from our surroundings and diminishes our experience of the landscape, as attention is mainly paid to the mediascape of the mobile device. Analysing the experience of participating in 'Core Sample' shows how we can in fact experience several scapes at once: landscape, soundscape and mediascape — and even partly (co)-create them by our interaction. Walking and listening are not only the two key modes for experiencing GPS sound walks, they are also two powerful modes of connecting us to our surroundings — and mobile media can be part of this process of connection, rather than isolating or alienating us from them. 'Core Sample' as an edge species in the ecotone between a national park and mobile media has illustrated how this can be performed. The edge species only comes alive when it is performed — walked and listened — by the participant.

Guest book entries (see Behrendt 2010) also reveal that mobile media experiences such as the GPS sound walk 'Core Sample' attract people to the outdoors that would not have otherwise made the trip to the island (but might have stayed at home in front of the TV or video games). This underlines the importance of analyzing how mobile media use and headphone listening can connect people to landscapes, rather than isolating them from their surroundings or alienating them further from 'nature,' as is often argued. This conceptual framework is relevant beyond GPS sound walks, as the use of mobile networked media in 'the countryside' becomes ever more popular, with the plethora of mobile phones and the recent obsession with lifestyle and sports-related apps underscore. Listening and walking are both intrinsically temporal — and can be particularly engaging and immersive, connecting us strongly to the physical landscape around us — and at the same time to the mediascape of mobile media especially when operating in tandem.

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Sonic Ecologies: Exploring the Agency of Soundscapes in Ecological Crisis

By Leah Barclay

Introduction

In John Cage's pivotal 1937 talk titled "The Future of Music: Credo," he said, "I believe that the use of noise to make music will continue and increase until we reach a music produced through the aid of electrical instruments which will make available for musical purposes any and all sounds that can be heard" (Cage 1937, 3). In 2013, Cage's visionary genius is clearly evident with a musical world of infinite possibilities aided by technology. The dramatic advancement of technology has truly cultivated a paradigm shift in how artists interact in both physical and virtual worlds. These changes have evolved and expanded our tools of expression but most importantly they have opened the ability to communicate at a higher level in an interdisciplinary context.

In a recent edition of "Musicworks," Joel Chadabe stated that the current artistic practices of electroacoustic composers are rooted in the idea that new technologies, unlike traditional musical instruments, can produce sounds used to communicate core messages, including information about the state of our environment. He claims that we are all participating in the emergence of a new type of music accessible to anyone, which can be used to communicate ideas that relate more closely to life than those communicated through traditional musical forms. He believes we need to think of ourselves as "leaders in a magnificent revolution rather than the defenders of an isolated and besieged avant-garde" (Chadabe 2011).

A Shift in Consciousness

Imagine the potential for sound in generating a shift in consciousness in a way that might provoke critical awareness for world issues, such as climate change. For instance, American environmentalist/author William Ernest "Bill" McKibben (2011) recently said, "When art both of great worth, and in great quantities, begins to cluster around an issue, it means that civilization has identified it finally as a threat." He views artists as the antibodies of the cultural bloodstream and fundamental to social change. As this social movement of creative thinking expands internationally one might be reminded of Jacques Attali's seminal 1985 text where he refers to music as not just simply a reflection of culture but a "harbinger of change."

He states, "For twenty-five centuries, western knowledge has tried to look upon the world. It has failed to understand that the world is not for the beholding. It is for hearing. It is not legible, but audible" (Attali 1985, 3). One might consider this both a challenge and an unprecedented opportunity for composers to gain a critical understanding of the global discourse needed in devising new processes for a sustainable future. Electroacoustic music, with the use of natural sounds, has a profound opportunity to ignite an awareness and connection to the environment. But is the role of the artist purely to comment on crisis? To create awareness of issues? Or can provocation extend beyond expression to create a behavioral shift in deeply engrained unsustainable ways of thinking?

My recent research has deeply explored these questions and resulted in the development of a multi-platform methodology that could provide a framework to facilitate cultural change through sound. The core of this methodology centers on a site-specific electroacoustic music project embedded in a multi-layered community-cultural engagement process developed in response to the community under study at a particular time. The framework, titled *Sonic Ecologies*, involves five stages that I will introduce through "case" studies that exemplify key aspects relevant to the development of this model. These cases, as individual projects and as a whole, ultimately serve as a catalyst and represent an unparalleled opportunity for observing artists as agents of change in environmental urgency. While aspects of the *Sonic Ecologies* framework might appear evident and simplistic, it is grounded in significant research resulting from my doctoral work. My practice-led research involved conceiving and delivering seven original electroacoustic projects for dissemination in multi-platform environments. The divergent projects were created in cultural immersion, spanning from ambitious sonic explorations in the center of the Amazon Jungle to sounding the rivers of the world through India, Korea, China, Australia and New Zealand. The delivery and dissemination of each project was underpinned by a rich methodology that pivots on the site-specific project embedded in community cultural engagement.

The concept of cultural immersion challenges the traditional notion of an isolated composer apart from community and is potentially, if not profoundly, influential on his or her sense of validity within the larger multi-dimensional context of practice. It is no longer about notes on a page, beyond that dotted bar line that finishes the project, but rather opens an entire spectrum of compositional decisions in a constantly evolving process that seemingly responds naturally, to only expand. The results of such richness and diversity can be attributed to working directly with communities and experiencing creative inspiration in cultural immersion.

During these projects, it became evident that the environmental interconnectedness many of us have been seeking is still prevalent in these first nation cultures. This was evident when working with communities in the Amazon Rainforest, who were intuitively tuned to the patterns of the local ecosystems. It was also clear when working with Australian Indigenous artist Lyndon Davis and New Zealand artist Jo Tito who taught me about listening to the environment and their perceptions of environmental interconnection. The process of simply listening to the environment can completely shift our perception. In fact, these collaborative processes transformed my approach to listening and undeniably influenced my creative responses to the environment. My research began as an exploration of the sustainability of electroacoustic music and evolved into a complex web of projects harnessing electroacoustic music as a change agent. The beginning was fueled by an isolated intention,

grounded in a visually dominant western society. Yet through the process of cultural immersion I discovered a tool that not only provides a gratified language of creative expression, but also a voice for the communities and environments collaborating on these projects. The discoveries and observations from each individual project showed a clear trajectory towards a set of tools to initiate cultural changes through environmental electroacoustic music. As a result, the Sonic Ecologies Framework was developed as a means to create an accessible methodology for artists interested in implementing similar projects.

Sonic Ecologies Framework

The following provides a brief overview of the five essential elements of the Sonic Ecologies Framework: (1) site-specific subject matter, (2) multi-platform dissemination, (3) community education and engagement tools, (4) interdisciplinary partnerships and collaborations, and (5) long-term strategic vision. The core of this methodology revolves around a site-specific electroacoustic music project embedded in a multi-layered cultural engagement process developed in response to specific communities. The site specificity requires that this methodology be intrinsically flexible in order to be adaptable within a diversity of environments and communities. It is in essence a practice-led creative research process, taking an ecological approach to contextualising a project within an environment. While there is an essential degree of freedom and adaptability, the process is grounded within the theoretical contexts generated by the artists who experiment and innovate within a continual spiraling between theory and practice.

1. Site-specific Subject Matter

In the context of this process, the site-specific nature of the electroacoustic music project is essential. It must be pertinent to the community and grounded within a comprehensive understanding of the proposed thematic content. The sound work of Douglas Quin in Antarctica and Francisco Lopez in the Central Amazon Jungle are obvious examples. Blue Gold, by Australian composer Ros Bandt, also provides a pertinent example in this context. Blue Gold is a performance installation investigating the delicate balance between wet and dry in our natural landscape (Bandt 2012). While it has been performed in a diversity of contexts, the site-specific realisation over Lake Cootharaba in Australia's UNESCO Noosa Biosphere at Floating Land Festival in 2011 provided a platform for the local community to truly engage in the thematic of the work. As part of the site-specific performance, Bandt participated in a dynamic ten-day program of community workshops, sound walks, forums and interactive labs designed to confront and challenge a spectrum of water issues across disciplines. Blue Gold became a vehicle for these conversations, ideas and actions that rippled throughout the community, a community that was changed by this process as evident in their actions and enthusiastic preparations for future soundscape projects. Floating Land demonstrates how successful arts and culture can draw community together and inspire sustainable activities. The local community now actively conserves water and works together to develop collaborative projects for this event. Floating Land was recently recognised as a national model in Australia's new Cultural Policy. The Council regards the role of local government to be one of fostering a creative and sustainable environment. Its vision is to become Australia's best region for creativity and sustainability through the development of special strategies on green art, biodiversity and climate change.

2. Multi-platform Dissemination

The Sonic Ecologies framework encourages collaboration between artists and communities and multiple outcomes where

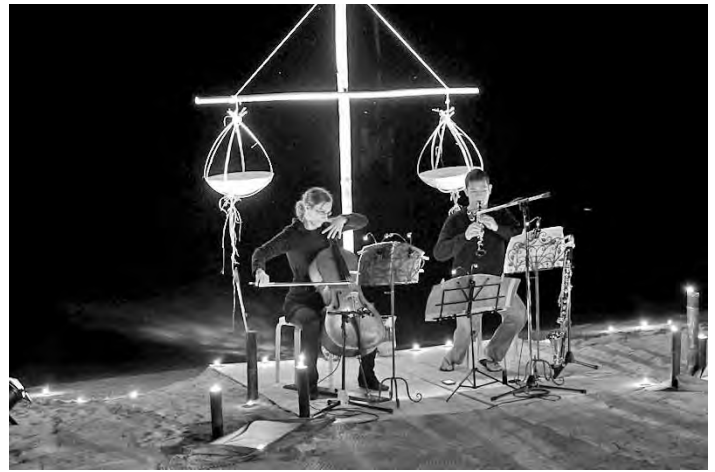


Fig.1: *Blue Gold* performance at Floating Land 2011. Photo by Wild Honey Photography

possible. While one core creative outcome is most likely the central intention, the adaptability of the project for a range of environments is essential. The sonic outcomes should be disseminated in a range of environments for maximum exposure; this includes harnessing the power of virtual platforms to facilitate global accessibility. This is exemplified in the EcoSonus project commissioned for Floating Land 2009, a multi-channel sound installation with regional site-specific performances, collaborative community compositions and an interactive website streaming field recordings and alternative compositions.



Fig.2: Leah Barclay field recording in the Noosa Biosphere Reserve for Eco Sonus. Photo by Adam Sebastian West

3. Community Engagement and Education Tools

There is undeniably a strong movement associated with environmental sound art emerging internationally. This is evident through the establishment of organisations such as Ear to the Earth, the environmental program of the Electronic Music Foundation. Numerous cultural critics perceive the industrialized world as a visually dominant society and recommend education to ignite the auditory perception. If a particular community is to engage and comprehend the value of a "sound" project, they must gain a deeper understanding of their sonic environment and play a role in the process. Community engagement and education tools will always evolve depending on the nature and accessibility of the proposed community but the standard suggestions include activities, such as community sound walks, participatory field recording sessions, capacity building workshops and providing access to the appropriate technology for the community to remain engaged in the process. This research has also identified the necessity of engaging the younger generation in participatory soundscape experiences. As the future



Fig.3: *Sonic Explorers workshops at Treeline Festival 2012.* Photo by Wild Honey Photography

citizens or inhabitants, it is this generation who will experience the true ramifications of climate change. The Sonic Explorers project, commissioned for TreeLine 2012 in Australia, involved workshops, collaborative compositions, sound mapping and performances all aimed towards connecting young people to the environment through sound (www.sonicexplorers.org).

Sonic Babylon, the creation of New York-based artists Nora Farrell and the late Bill Duckworth, is a prime example of innovative community engagement through sound. Riding local Wi-Fi networks, the Sonic Babylon sound gardens grow with music, sounds, and stories accessible on mobile devices in selected spaces within a community. This first sound gardens planted in Australia included historic recordings, local musicians, indigenous stories and sound marks of the communities. The sound garden is interactive and can be both heard and manipulated by the community. As visitors move through the garden, the Sonic Babylon application tracks their position in the space and the 3D audio engine generates a real-time sound mix relative to the location of the planted sounds (www.sonicbabylon.com). Sound gardens have a diversity of positive outcomes for a community including the ability to repurpose existing digital content (such as oral history) and also the

ability to observe a system, a virtual ecology, and hear what kind of voices and themes may arise. The key attraction is its accessibility and versatility, and its ability to grow within a community over time. In the context of Sonic Ecologies it can function as both the core creative work and the ongoing community engagement. The majority of the initial sound materials planted in the Sonic Babylon case study for this research were historic recordings, particularly revolving around the indigenous history of the region. It was extremely rewarding to see young people interacting with Sonic Babylon and gaining insight into the indigenous history of the area, particularly considering these soundscapes are not traditionally accessible to the community.

4. Interdisciplinary Partnerships and Collaborations

In order to truly attempt to create a paradigm shift with Sonic Ecologies, electroacoustic music must be augmented from its traditionally isolated academic circles and expand into regional communities collaborating with environmentalists, conservationists, scientists and policy makers to expand awareness. Creating a support network around the project will be essential in its future



Fig.4: Ilka Nelson field recording for Biosphere Soundscapes.
Photo by Jemma Darlington

viability and sustainability within a community. The Biosphere Soundscapes project was conceived and designed within the Sonic Ecologies framework, particularly focusing on interdisciplinary partnerships. Biosphere Soundscapes is a project designed to inspire communities across the world to listen to the environment and re-imagine the potential of Biosphere Reserves as learning laboratories for a sustainable future. The project connects and inspires the communities of global Biosphere Reserves through emergent technologies, innovative creative practice and soundscape ecology (www.biospheresoundscapes.org). It is underpinned by the creative possibilities of soundscape ecology, a rapidly evolving field of biology used to record environmental patterns and changes. It is also the first major sound project for the UNESCO World Network of Biosphere Reserves, which is comprised of 610 sites in 117 countries. This project is ultimately acting as the catalyst for a global participatory environmental project accessible to anyone with an internet connection. Biosphere Soundscapes was launched on World Listening Day 2012 in Australia's Noosa Biosphere Reserve with a community field-recording lab and a public forum of international sound artists discussing recent projects and practices. The project is currently expanding in ten international Biosphere Reserves across five continents, with the hope that it will be actively mapping the changing soundscapes of thirty Biosphere Reserves within the next six years. Partnerships and collaborations with a spectrum of international organisations from the creative, environmental and scientific sectors will be essential to its impact and future success.

5. Long-term Strategic Vision

The artist implementing the Sonic Ecologies framework is initiating a process within a community. The creative outcomes serve as significant milestones but ultimately it is the process that will continue to resonate and evolve over time. As with any form of community engagement, Sonic Ecologies requires time in order to facilitate change. The capacity building community engagement is designed to empower the community to continue working long after the artist has departed. It is therefore essential the artist invests critical thought into the methods in which the community will continue to

engage as well as the appropriate technology for the project to remain accessible and functional. The most obvious strategy is to entrust low cost digital recorders with a key stakeholder in the community and design a web platform to enable the locals to continue creating and uploading content. It should also go without saying, plans to return to the community should be instigated by the artist, whether this be a concert of future creative outcomes, workshops or simply visiting the key collaborators to maintain relationships and energy in the process. The Sonic Ecologies Framework is not a complex idea; it is simple, based on logic and grounded in significant practice-led research outcomes. As a result, it is accessible for artists interested in implementing similar projects on a local and global scale.

While I will continue facilitating projects through this process, it is also hoped the wider sound community will grasp the potential of delivering work with similar ideas. Now, more than ever before there is a critical need to listen to our environment and generate a paradigm shift that engages our auditory perception. Sound, as a creative medium, is undoubtedly one of the most powerful means to stimulate this shift in consciousness. Electroacoustic music, with the use of natural sounds exposing the state of the world, could be an unprecedented tool for artists taking action to garner awareness of ecological crisis. This research is ultimately underpinned by the realisation that artists can play a role in creating a sustainable future, and as proposed by Joel Chadabe, who reminds us to think of ourselves as “leaders in a magnificent revolution” (Chadabe 2011).

About the Author

LEAH BARCLAY is an Australian composer, sound artist and curator working internationally. She has been the recipient of numerous awards and has directed and curated intercultural projects across Australia, India and Korea. She is passionate about the role interdisciplinary art can play in community empowerment, social activism and cultural change. Contact her at info@leahbarclay.com/www.leahbarclay.com

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The Soundscape Project for Earthquake Disaster 311

Japanese Soundscape brought to Germany

by Michael J. Paull and Natascha Rehberg

Part of the “*The Global Composition. Conference on Sound, Media, and the Environment* (Hochschule Darmstadt, Germany, July 25–28, 2012) was an exhibition designed by the Japanese researchers Keiko Torigoe, Koji Nagahata and Yoshihiro Kawasaki in order to report on the ongoing *Soundscape Project for Earthquake Disaster 311*, created by the Soundscape Association of Japan.

Entering the exhibition space, we barely notice the constant roar from the ocean playback, eventually mixing up with the typical crackling of a Geiger counter and the voice of a Japanese newsreader. The sounds come from five tubes, which are arranged in front of a poster wall. The posters tell us about several soundscapes that were transformed, such as Goishi Kaigan shore. Its famous Thunder Rock, states Koji Nagahata¹:

lost its thundering sound and also the nearby beach lost its former soundscape, as the tsunami wave had taken away a huge amount of stones from the beach. However the formerly uncommon sound of a Geiger counter appears now in the soundscape and the *radiation level report* in the media begins sounding familiar to the Japanese audience. It sounds like a weather forecast.

Beyond this, the posters reveal important information, with stated purposes varied among the unique presentations. *The Fixed-Point Recording Project* focuses on 15 selected “highly damaged places,” whereas the *Visiting 100 Soundscapes of Japan Project* considers those “stricken soundscapes, that have been part of the project *100 Soundscapes of Japan*” since 1996. Lastly the *Fukushima Soundscape Project* “aims to observe the change of the soundscapes since the nuclear accident of the Dai-Ichi power plant.” The listening stations are no less important. There we find a group of computers, inviting us to experience the recorded soundscapes. They provide pictures and some additional information on selected places, too.

Listening to Fukushima Soundscape Project²

We start our listening session with the Machi-Naka square, May 13, 2011, 4:40 PM: An engine roaring (is it a chain saw?), some traffic in the background, a bus stops. Crows are cawing. Female voices passing by. Crows cawing. “At that time, senior high school students always go home. (...) No one (except I) stayed the square,”³ Koji Nagahata’s memorandum below the picture tells us.

The next click brings us into Nankoudai Elementary school, June 17, 2011: A heavy machine (or two?) is working very close, the engine constantly revving. Birds are chirping somewhere. After the record is over, the Geiger counter sound from the tubes reaches us through the headphones.

Yet another case—Watari Junior High School. May 27, 2011: a variety of birds are singing. Traffic and voices in a distance. June 10, 2011: singing birds are still dominating. July 8, 2011: less birds, some children, talking, eventually shouting. Forming a speaking choir.

The presence of singing birds is somehow unexpected. Won’t they suffer from the radiation⁴? In the city centre, but also in parks like the Kotori no mori bird forest near the city centre, where “people used to enjoy fresh green”⁵ — the birds seem to revel alone. A new, wonderful soundscape is created — and nobody is there to enjoy it. Same with the Shinhama park and the Mt. Shinobu, where cicadas eventually complement the dominating sounds of the birds.

Listening to Fixed Point Recording Project

Clean-up efforts and reconstruction works can be heard at several places here, too. But as the selected spots are mostly located near the coast, we also discover various sounds from the ocean, such as the call of the seagulls or the ocean surf. The images that are presented with the recordings mostly show scenes of destruction, with rubbish and debris covering the ground. We hear the soundscape of reconstruction and deconstruction instead of daily life sounds.

How could the change in soundscape affect the residents?

A sound occurs, disappears or changes - sudden changes attract high attention. The hearing sense can be a developed sense for changes, as for earlier generations it could provide information that one might need to survive. Therefore, the sudden change in a familiar soundscape will not go unnoticed. In Fukushima, the absence of children’s voices and the decrease of other human sounds at public places can evoke feelings of stress and fear. How will people ever be able to adapt to such a situation? The discomfort that is triggered to the “quietness” of the city refers to a real threat — the level of nuclear radiation will remain constant for thousands of years. Nuclear radiation is invisible — but soundscapes make it perceivable here: The birds singing, the shovels of the decontamination workers piercing the ground, along with the dose level reports, tell us: *Take care!* The situation seems to be different for the people at the coast. Obviously, in all disaster affected areas, sounds of construction-work will be dominating for some time and things will never be the same. But, beside the soundscape itself, isn’t perception of the residents also going to be rearranged⁶? How will they *hear* the ocean sounds in the future? Most of us conceive ocean sounds as soothing and beautiful. Just imagine, how would it change, if *your* house were destroyed by a tsunami wave?

Appreciation

Thinking of soundscape as something that is shaping our lives and therefore valuable to observe and conserve for future generations, one comes to the conclusion that The Soundscape Project for Earthquake Disaster 311 collects revealing data and takes the chance to report on a change, that can be examined and compared thanks to earlier soundscape recordings. As the project aims also to “consider and discuss desirable forms of soundscapes after the experience of the earthquake,”⁵ Keiko Torigoe and Koji Nagahata offered daily workshops for

Exhibition Review (continued)

discussions during the exhibition and invited visitors to write down their thoughts on a public board. Altogether, the opportunity to report on the project had been used to its fullest capacity.

The exhibition then attracted attention from the press, too. The big radio station “Hessischer Rundfunk” reporting on the exhibition described it as “The spooky sound of Fukushima”⁷ and the online newspaper *Echo* noted, that a group of Japanese experts were going to explain the dramatic change in Japanese Soundscapes due to the catastrophe in March 2011⁸.

Conclusion

Lost sounds, new sounds, changed sounds. Earth reshaped those soundscapes in an instant.

An impressive demonstration of power, that will be perceivable for a long time and that will change people’s perception, too. The disaster is once more *asking* us to listen — to nature in all its manifestations, to your common sense, to your conscience.

“Thanks for sharing this and keep up the good work. It’s an inspiration!” was a visitor’s comment — and we fully agree.

About the Authors

MICHAEL J. PAULL and NATASCHA REHBERG are currently students of Digital Media at Hochschule Darmstadt, University

of Applied Sciences, Germany. They assisted with the Earthquake Disaster 311 exhibition. Michael is focusing on interactive media design and is engaged in considering acoustic ecology in his studies. Natascha is a composer and has started writing about sound and soundscape related issues. She works as a student assistant and tutor of the Soundscape & Environmental Media Lab at the Hochschule Darmstadt.

Endnotes

1. The Kaminari-Iwa (Thunder Rock) was selected in 1996 as one of the “100 Soundscapes of Japan: Preserving Our Heritage.” The project, driven by the Japanese government, selected and recorded 100 Japanese Soundscapes.
2. Recordings of Fukushima Soundscape Project can be found on: www.sss.fukushima-u.ac.jp/~nagahata/fsp_311/index-e.html (accessed 23 December 2012).
3. Nagahata, K. “Fukushima Soundscapes (After 3.11).” www.sss.fukushima-u.c.jp/~nagahata/fsp_311/machinaka_110513/index-e.html (accessed 23 December 2012).
4. Quantity and variety of species of birds in this forest have not changed since the disaster: Nagahata, K. “Fukushima Soundscapes (After 3.11).” www.sss.fukushima-u.ac.jp/~nagahata/fsp_311/kotorinomorimori_110501/index-e.html (accessed 23 December 2012).
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7. Stübig, R. “Der gespenstische Klang von Fukushima.” HR2 Kultur. www.hr-online.de/website/rubriken/kultur/index.jsp?rubrik=5986&key=standard_document_45530973 (accessed 20 February 2013). See, for additional resource material, www.hr-online.de/website/suche/home/mediaplayer.jsp?mkey=45541807&type=a&xtmc=global%20composition&xtcr=3 (accessed 20 February 2013); also, Langenohl, U. “Klangwelten,” in *HR Info, Explorer*, 27 July 2012, 13:56.
8. “Die Welt als Komposition aus Geraeuschen,” in *Echo Online*. www.echo-online.de/ratgeber/wissenschaftundtechnik/akustik%F6kologie120724./Die-Welt-als-Komposition-aus-Geraeuschen;art478,3084139 (accessed 23 January 2013).

“We should always keep in mind what acoustic ecology means. It means speaking out against destructive and unnecessary noise. It means saving our ears and those of others who might not realize that sound can be dangerous.”

— Murray Schafer



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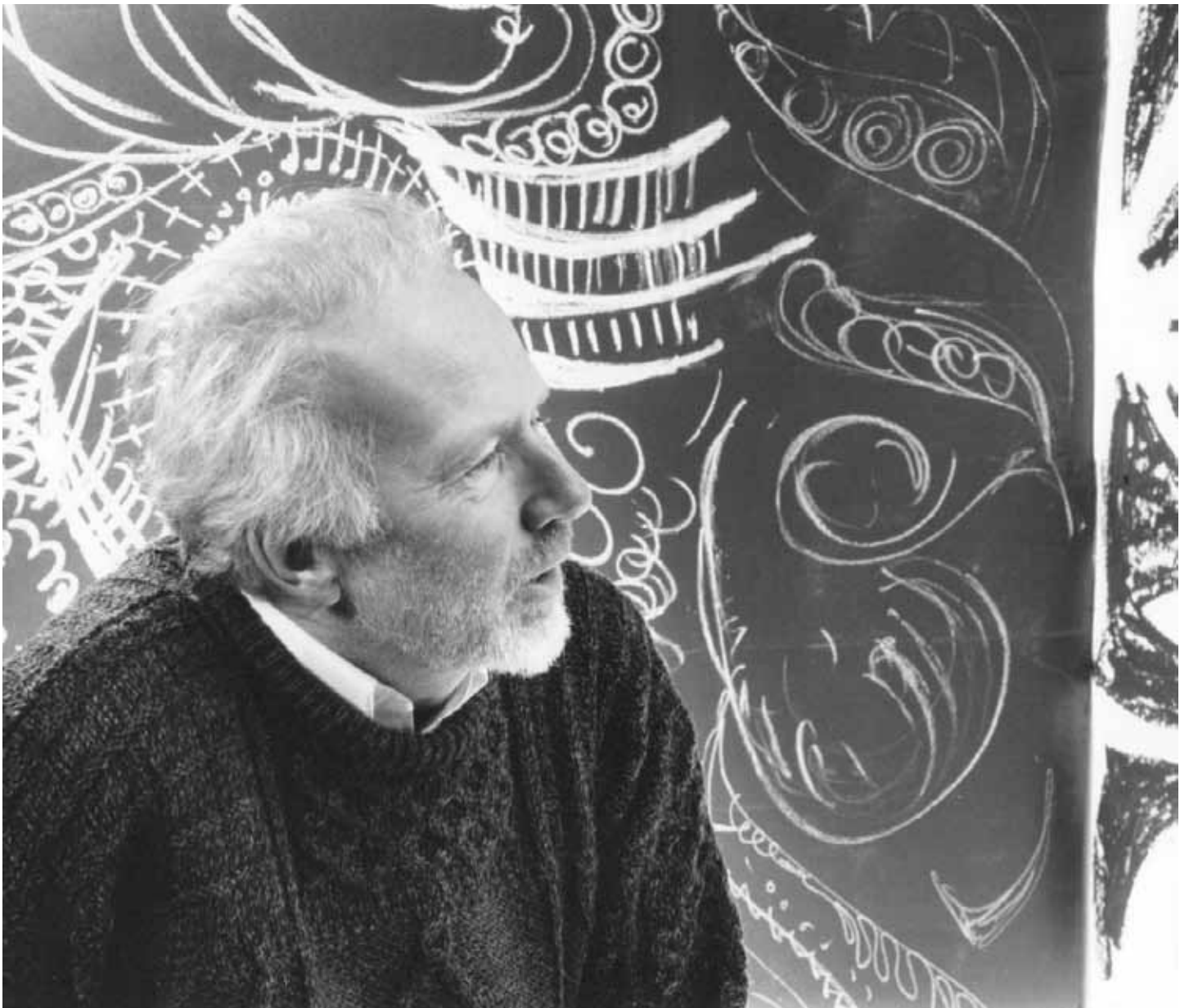
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and Journal Editorial Committee Chair*

On a Sound and Listening Wilderness Retreat, organized by Jennifer Schine in the Broughton Archipelago, British Columbia's Northern Pacific West Coast August 2012. Photo by Andrew Czink

“

Can we really
improve the soundscape?
Of course we can.
We must go back and educate
children and young people
to listen more carefully.”

—*Murray Schafer*



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