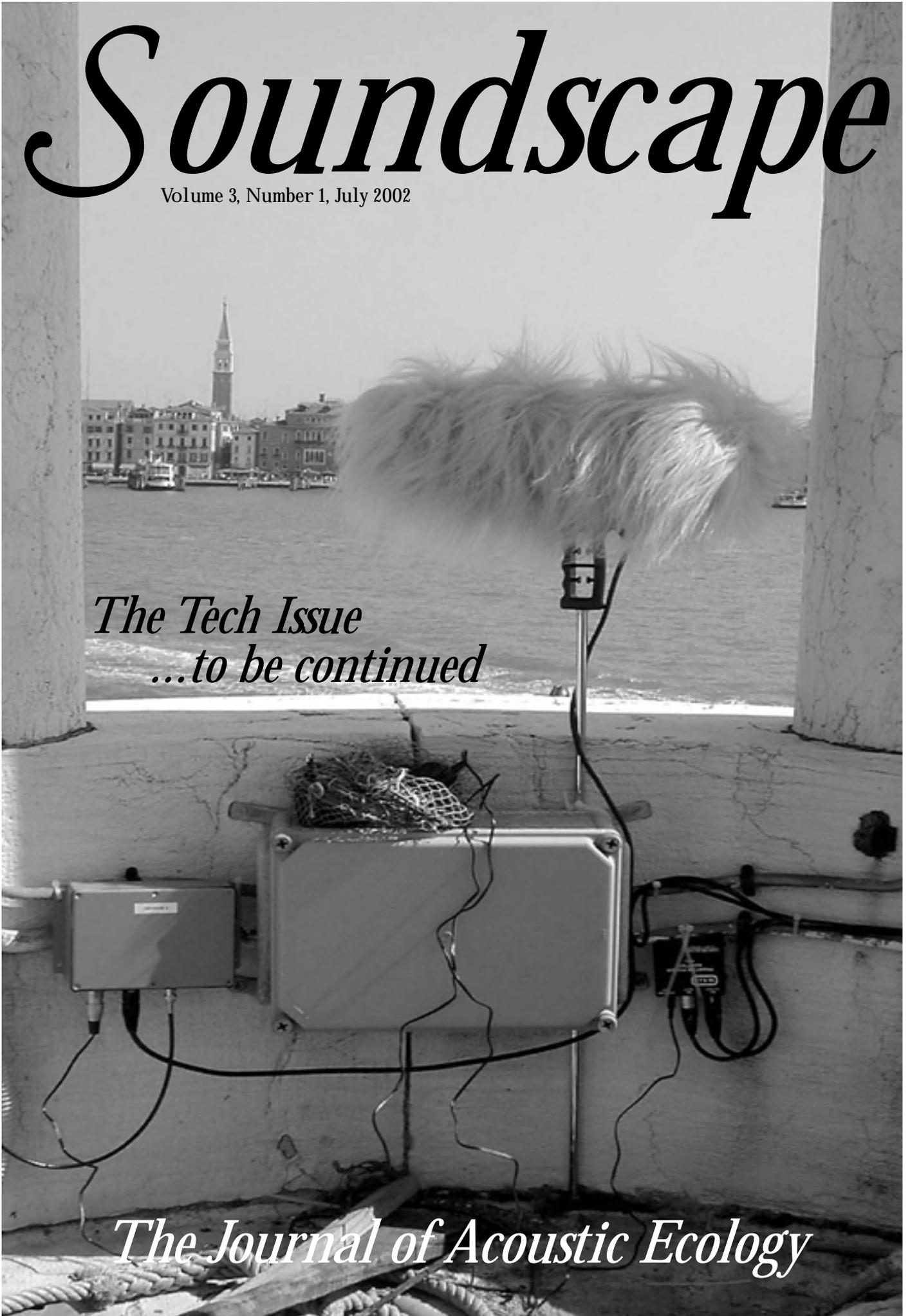


Soundscape

Volume 3, Number 1, July 2002

*The Tech Issue
...to be continued*

The Journal of Acoustic Ecology



World Forum for Acoustic Ecology (WFAE)

Soundscape

The Journal of Acoustic Ecology

Volume 3, Number 1, July 2002

issn 1607-3304

Soundscape is a biannual 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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Printing: Snap Printing, Melbourne
Front Cover Photo: Bill Fontana
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The printing and distribution of this edition of the journal were made possible through membership contributions and donations.
Special thanks to Hildegard Westerkamp.

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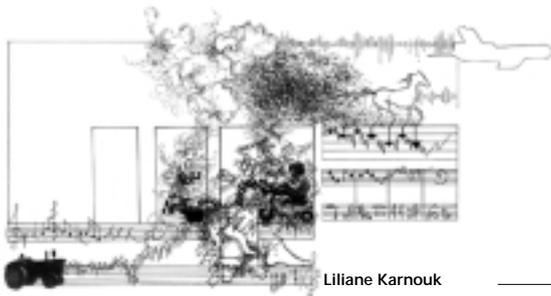
Ideas for journal themes, proposals for new sections, as well as visual materials, are welcomed. You may submit either a proposal or a complete manuscript of a potential article to *Soundscape*. The Editorial Committee would generally prefer to communicate with you beforehand regarding your idea for an article, or receive a proposal, or an abstract (contact information below). Please also download our **Guide to Contributors: Instructions for the Preparation of Materials for Submission to Soundscape (PDF)** on the WFAE Website at: <http://www.wfae.net>

Upcoming Issue: The Ecology of Underwater Sound

Future themes: Sound Design, Hearing Loss, Use of Music in the Soundscape, Sacred Soundscapes, Economics and Acoustic Ecology.

Submissions. Please send articles, letters, and materials for the following sections in this journal: **Feature Articles;** **Current Research:** a section devoted to a summary of current research within the field; **Dialogue:** an opportunity for editorial comment by the membership; **Sound Bites:** a summary of acoustic ecology issues found in the press; **Sound Journals:** personal reflections on listening to the soundscape; **Soundwalks** from around the world; **Reviews:** a section devoted to the review of books, CDs, videos, web sites, and other media addressing the theme of Acoustic Ecology (please send your CDs, tapes, books, etc.); **Reports, articles, essays, letters** from students and/or children; **Announcements** of acoustic ecology related events and opportunities; **Quotes:** sound and listening related quotations from literature, articles, correspondence, etc.; **Random Noise:** a section that explores creative solutions to noise problems.

Please send correspondence and submissions to: *Soundscape—The Journal of Acoustic Ecology* School of Communication, Simon Fraser University, Burnaby, B.C. V5A 1S6 Canada. E-mail: jwfae@sfu.ca



Soundscape

The Journal of Acoustic Ecology

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Editorial

Many discussions about technology refer to and question its use with a strong moral component. They define technology as being “inauthentic”, opposed to life and as inhuman, and at the same time identifying nature as the “real” and as “healthy”. This notion seems to be strongly supported by a skepticism towards technology as expressed in *The Tuning of the World* (Schafer, Toronto, 1977) and other publications dealing with soundscape issues and acoustic ecology. The opposition between machine and nature has in many ways been identified as the central cause for the decrease of acoustic diversity, the increase of noise and the growing inability and ignorance of auditory awareness in general.

On the other hand, among acoustic-ecologists and soundscapers you would hardly find anybody denying the usefulness of technology for documentation, education and sound composition. So, what is acoustic ecology’s relationship to technology? Is it simply a pragmatic one? It seems to be one of the movement’s lesser discussed contradictions, and has not yet found its way from praxis to theory.

At the same time, there is the rapid development of digital networks and new technologies, which sharpens this contradiction even more. Digital technology allows for dynamic and realistic, listener-centered spatial sound experiences. Physical modeling simulates three-dimensional properties of a space or a body giving authentic auditory results. New interfaces allow new ways of accessing the computer’s electroacoustic possibilities by spatial movement, gesture or physiological reactions. It seems the more sophisticated the computer becomes, the more it takes human physicality and human measure into account. And last but not least, the interactive possibilities of digital networks lead to new theory-building which shifts the predominantly alphabetical paradigm of frontal perception to the environmental awareness of an assumed “age of tactility”—from arresting gaze to immersive connectivity.

As guest editors it is our intention to stimulate the multi-layered and contradicting relationships between acoustic ecology/soundscape and new technologies. Not with the intention of achieving a necessary “harmonization” or resolution of the seemingly antithetical relationship between ecology and technology, but as a way to demarcate a space in which the inherent tensions and ignored overlappings can be articulated productively.

With this in mind, this issue of *Soundscape* presents an interview with one of the leading theorists in the field of perception changes and new technologies: Derrick de Kerckhove, interviewed by Tim Wilson, will shed light on contradictions that arise from new interactive technologies and their cultural influence on auditory perception. In addition, the issue presents the thoughts of more than a dozen artists/publicists/theorists—some related to acoustic ecology, some not, all involved in the technological use of sound. We asked them to let us know their approach to the tech-issue and its contradictions. Is it surprising that their answers showed a reluctance toward using the term of “ecology”, favoring “soundscape” instead? An important observation, we think, as it touches the historical identity of the soundscape movement.

We are happy that two internationally renowned sound artists—Christina Kubisch and Bill Fontana— whose environmental works over the last few decades engage the topic of soundscape, will tell about their technological-artistic concepts and their changes. And, finally, the need for an “electroacoustic ecology” is expressed in an article by Andra McCartney.

How to speak about acoustic ecology in a way that participates in contemporary discourse surrounding the technological? We hope that this publication is the first step toward inciting such discussions, and that it provokes and challenges further steps, further voices, further controversies. The tech-issue is waiting to be continued.

Sabine Breitsameter/Brandon LaBelle
Guest Editors

Regional Activity Reports

Australian Forum for Acoustic Ecology (AFAE)

by Nigel Frayne

The AFAE held its Annual General Meeting on August 8, 2002 where all executive positions were open for nomination and appointment by voting members. It was determined that the executive be essentially unchanged for the coming year however the position of Vice President is yet to be filled. The financial status of the AFAE is modest yet sound. The aim for the coming year is to work to create more opportunities for interaction between members as well as reach more interested people in the community by way of informal gatherings.

The long anticipated International Symposium has finally materialised and is scheduled for the week of March 19—23, 2003 (see page 27 for details). This is thanks in no small part to the support of Murray Schafer and Hildegard Westerkamp who will be participating in various ways and the welcome support of the Victorian College of the Arts. The exact format for the event will be developed over the coming months and announced on the AFAE web site located at <http://www.afae.org.au>

The domain, [afae.org.au](http://www.afae.org.au), was recently registered and donated to the AFAE. A temporary host has been established for a basic home page. This will hopefully be developed into a useful reference and resource for the membership.

The AFAE membership has fallen in size over the last year however it continues to provide strong support for the WFAE through active positions on the board and committees, printing and distribution of *Soundscape—The Journal of Acoustic Ecology* and the hosting of the WFAE membership database. The Symposium in 2003 provides further potential for WFAE members and executive to meet. It is hoped that the attendance of our international colleagues in Melbourne will provide a much needed boost to the awareness of acoustic ecology in Australia and to the growth and effectiveness of the AFAE.

Contact:

Nigel Frayne: nfrayne@netspace.net.au

The Melbourne Symposium on Acoustic Ecology March 19—23, 2003

Acoustic ecology covers a wide and multi-disciplinary field of study and activity. Six previous conferences on acoustic ecology for the most part have emphasised the field of soundscape studies and soundscape art. The Symposium in Australia would be deliberately structured to include the broader spectrum of interests such as audiology, architecture, bioacoustics, geography, environmental design, acoustics, electroacoustics, etc. and the relationships between them.

The 2003 Melbourne Symposium brings together the existing community and introduces interested people to the broader concepts of acoustic ecology creating a groundswell of awareness and activity in this part of the world.

For details see page 27 in this Journal.

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

by Darren Copeland

As indicated in the last report, CASE is currently researching new project possibilities. Currently the organization is in conversation with Diane Lebouef about providing research assistance for her exhibition on sound and light at the Museum of Civilization in Quebec City. Details of the project are still in development. Therefore, I will report in more detail in the next issue of the Journal.

In the meantime, other soundscape activities have taken place over the summer. CASE was a co-producer with the Canadian Society for Independent Radio Producers (CSIRP) in the fourth *Full Moon* audio workshop held this year in a new location in Ladysmith, Quebec. CASE President Darren Copeland was an artist-in-residence with St. John's radio artist Chris Brookes. Darren lead a project where participants documented different sound parameters during a ten-minute listening session on the Au Grand Bois camp site in Ladysmith and from that material produced soundscape pieces. The quiet and spacious environs of the site in the Gatineau mountains supported what were new explorations of sound for many participants and in other cases nurtured an environment of critical reflection and introspection on the nature of radio documentary production. For information on the workshop visit www.fmok.org.

In the Toronto region, *New Adventures in Sound Art* has produced a number of activities in the past few months that have dealt with the soundscape in different contexts. A weekend workshop for radio producers organized in partnership with CSIRP took place during the *Deep Wireless* radio art festival in April 2002. The workshop introduced producers of community and public radio to Deep Listening sound meditation and sound-making practices as a means of finding authentic voices that stretch beyond the verbal and intellectual focus of much radio. There was a downtown soundwalk for the general public during *Deep Wireless* as well as a soundwalk of Toronto Island during the annual *Sound Travels* concert weekend this past August. For info on *New Adventures in Sound Art* activities visit: www.soundtravels.ca.

Please email me with notification about soundscape activities in your area of Canada for inclusion in this article. My address is darcop@interlog.com and please use the phrase CASE Report in the subject header.

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Forum Klanglandschaft (FKL)

by Albert Mayr

FKL's council and members are pleased that it was possible to find a satisfactory solution regarding the affiliation to the WFAE and to clear up misunderstandings. As a side remark—perhaps pertinent to our ideas—I may add that this experience has shown that e-mail, for all its speed, is (still) an incomplete substitute for direct acoustic communication.

FKL's membership has had a sharp drop, unfortunately, but those who are still with us are active and concerned. During the preparations for this year's council meeting vice-president Justin Winkler has stressed the need of re-thinking the role of an association such as ours. Since the founding of the FKL the context has changed considerably, especially because there are now several groups pursuing similar tasks. This is certainly true for the German-speaking countries and I am glad to report that some contacts have been established:

- with the project *Ganz-Ohr-Sein* at the University of Munich. The proceedings of the project's first conference, "Die akustisch gestaltete Schule—Auf der Suche nach dem guten Ton" (The Acoustically Designed School—In Search for the Good Tone), have appeared recently (for details see the announcement below).
- through Hans Ulrich Werner—the ever fertile and creative producer of soundscape-related media works—with the informal group *Hören Heute* (Listening Today) which held the meeting "Wenn du den Tiger hörst, ist es zu spät" (When You Hear the Tiger, It Is Too Late) in Romainmotier, Switzerland, September 2001.
- through Werner Pütz, University of Essen, with the campaign in schools *Take Care of Your Ears* promoted by various German associations and institutions.

Some very fragmentary flashes on activities by members: Gabriele Proy opened the festival *Hear I am* devoted to women composers, with a concert of her soundscape compositions. Giuseppe Anzani gave a lecture "Soundscape and ritual landscape in the Cilento National Park" in Paris at the "Société des Paysagistes". Luca Miti's installation *Abendlied* was presented at Castello di Cennina. Luisa Morozzi is preparing, for Fall 2002 and early 2003, a series of seminars in Perugia. For March 2003 the FKL is preparing, in connection with its general assembly, a one-day public meeting in a newly opened art center in Meran (South Tyrol), with theoretical papers, educational projects, sound installations and a concert.

Contact: Albert Mayr: timedesign@technet.it
FKL: www.rol3.com/vereine/klanglandschaft

Some Recent Publications Involving FKL-Members:

- Marco Geronimi, *Cambiamo colonna sonora*. Educational CD-Rom published by the Culture and the Environment Departments of the Municipality of Milan, 2002.
- Luisa Morozzi, "Appunti per una antropologia del paesaggio sonoro", in *Annali della Facoltà di Lettere e Filosofia, Università di Perugia*. v. XXXIV-XXXV.
- L. Huber, J. Kahlert, M. Klatte (eds) *Die akustisch gestaltete Schule—Auf der Suche nach dem guten Ton*. Göttingen: Vandenhoeck & Ruprecht, 2002 (with a paper by A. Mayr).
- Albert Mayr (ed), *Musica e suoni dell'ambiente*. Bologna: CLUEB 2001 (with papers by J. Winkler, B. Truax, R. Barbanti, A. Colimberti, C. Schryer, L. Miti, F. Michi).
- Albert Mayr, *Suono Ambiente*. Educational CD. ants 2001.

United Kingdom and Ireland Soundscape Community (UKISC)

by Gregg Wagstaff

We are now more than half way through this year—is time accelerating or am I slowing down? (Maybe Albert Mayr can answer that for me?) Whatever, *Soundscape* and its production team keeps a pace with things and it is great to see another volume in print. So what are the soundings from the UK?

Since renewals were due at the beginning of the year, UKISC membership is remaining stable, with roughly the same amount of members (50). I am aware how difficult it has been for the UKISC management committee to meet 'face-to-face' due to geographical separation, work and family commitments. After the *Sound Practice* conference last year, there is a definite need for us to get together and focus on our future UKISC activities (like educational seminars and events), in addition to our publication of *Earshot*. As always though, beneath the surface, various individual members are at work with soundscape related projects.

Richard Whitelaw (composer) has been collaborating with an animator and an environmental worker on a series of educational workshops in south Wales. This involved soundwalks through community woodland, composition and photography. He also tells me that he will be presenting soundscape based work at a UNESCO function in the UK later this year, where he hopes to promote soundscape awareness to key UN workers in the UK.

Contact:

Gregg Wagstaff: earminded@ecosse.net

Japanese Association for Sound Ecology (JASE)

by Keiko Torigoe

The Japanese Association for Sound Ecology (JASE) has just started with 12 persons, in the following situation. The Soundscape Association of Japan (SAJ) in its annual assembly held on May 25, 2002, resolved to form the JASE as a constituted organization with the purpose of becoming an Affiliate of the WFAE. The JASE is one of the SAJ's operating divisions. But it is given special treatment as an independent sub-organization of the SAJ in order to meet both, the need to be a legal entity under Japanese law and to fit the requirements of the WFAE. The aims and goals of the JASE are first to meet those of the SAJ and to be the only affiliated organization of the WFAE representing the SAJ. It is conceived as an operating division of the SAJ with the specific purpose to collaborate in international activities with the WFAE and to give SAJ's members information about international activities of acoustic ecology. We are very happy to finally be an Affiliated Organization of the WFAE.

Contact:

Japanese Association for Sound Ecology (JASE)
c/o Keiko Torigoe
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150-8938, Japan

The FSAE elected a new board during its general assembly meeting on April 26, 2002 in Tampere. The new chairperson is Teri Hyvärinen, Simo Alitalo continues as vice-chair, secretary/treasurer is Outi Koivisto and member-at-large is Petri Kuljuntausta. Old board members Helmi Järviluoma and Ari Koivuniemi serve now as deputy members.

As I mentioned in my previous report, the FSAE has joined forces with The Finnish Association for Nature Conservation and various other citizens organizations in order to organize *The Day of Quiet* for the second time in Finland. A seminar *Polymorphic Soundworld* was held in Helsinki on October 8, 2001 and it seems now that *The Day of Quiet* has been quite influential and inspiring event. In mid-June Helsingin Sanomat newspaper reported that projects to map and safeguard remaining quiet areas have been started almost simultaneously by counties of Ylöjärvi and Hyvinkää and by the Regional Council of Satakunta.

In Ylöjärvi local nature conservationists were inspired by *The Day of Quiet* seminar to make a citizens' proposal to protect the remaining quiet areas within the county. The city officials agreed and started a survey in April. The Hyvinkää city environmental agency had started charting remaining quiet areas already before the October 8 event. Both the Ylöjärvi and Hyvinkää projects are important starting points and show citizens' growing interest in our acoustic surroundings. Five years ago it would have been much more difficult even to articulate these concerns in Finland.

From the perspective of considering the future, however, the Regional Council of Satakunta project seems most important. In Satakunta the aim is to map the quiet areas of an entire region. And it is hoped that the results of this study will help quiet areas to survive various zoning and land use processes that are currently going on in the area. The Satakunta pilot project is supported by the Ministry of the Environment and the Ministry of Transport and Communications. Interestingly this pilot project also involves the Finnish Road Administration and the Civil Aviation Administration of Finland whose decisions can have a crucial impact on the local soundscape.

The FSAE will be following these developments keenly and hopefully I will have some positive news to report in the future. Below I have included the websites of the counties and organizations involved in the preservation of quiet areas:

www.ylojarvi.fi/
www.hyvinkaa.fi/English/html/paasivu.htm
www.satakunta.fi/inenglish/
www.vyh.fi/eng/moe/moe.html

Contact

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Back Issues of *Soundscape* Now Available On Line

Adobe Acrobat PDF versions of *Soundscape* are now available for download at the URL below:

<http://www.wfae.net>

The board of the WFAE has been a fairly quiet place lately yet there have been significant activities happening within the various committees and generally within the WFAE and affiliate community. Our membership has dropped in some areas yet increased in others and overall there is a sense of consolidation.

It is a great pleasure to be able to announce that the recently formed Japanese Association for Sound Ecology (JASE) is now formally affiliated with the WFAE. JASE is a sub-division within the global structure of the Soundscape Association of Japan (SAJ), an organisation with many years of community action and a large and active membership base. JASE will provide a new and welcome voice to the WFAE by way of their board representative, Keiko Torigoe. Congratulations to the founding members and welcome!

The Journal editorial committee, our guest editors and volunteers continue to work with extraordinary determination and commitment to bring this journal to the membership. Direct subscriptions are also now available to non-members, libraries and organisations and it is hoped that this will enable a much wider readership. The editorial committee will be expanded and more guest editors utilised in an effort to spread the load and sustain the energy of the core team.

The affiliated reports which follow here are testament to the growing sense of community that is the WFAE. There is gradually increasing awareness and activity around sound and noise issues yet much still to be achieved. Of particular importance is the need to engage the wider disciplines and fully establish the field of acoustic ecology. Similarly the clear picture that is the future of the WFAE is yet to pull into focus. The organisation is still really in its infancy even as it heads for its anniversary next year, 10 years since Banff.

The international perspective of the WFAE will be of considerable value to the planning for the Australian Symposium next year (see page 27 for details). It is hoped that the WFAE board will be able to use the opportunity to meet face to face and ponder further consolidation of this intriguing organisation and the role it can play as a forum for its disparate and diverse membership.

Nigel Frayne

Chair of the Board, WFAE

WFAE—Electronic Contact Information

Website: <http://www.wfae.net>

Home to an extensive collection of Acoustic Ecology related materials—sembled and maintained by Gary Ferrington. (While you are at the WFAE Website—*Join our Discussion List!*)

WFAE Board: garywf@oregon.uoregon.edu

WFAE additional information: wfae@sfu.ca

Membership Secretary: wfm@sfu.ca

Dialogue



We invite your comments and criticism in response to anything you read in *Soundscape*, including other members' comments, such as those below. Please send your reactions to: jwfae@sfu.ca, or to the mailing address at the bottom of page 2.

[Ed. Note: This letter was written to Nigel Frayne in response to some of the points addressed in the editorial of the previous issue of *Soundscape* (Volume 2, Number 2). Even though it speaks about the AFAE (the WFAE's Australian Affiliate organisation), we think that many of the ideas and thoughts may be inspiring to other Affiliates as well as individual members.]

Great to receive such a nice fat issue of *Soundscape*! What Hildegard Westerkamp draws attention to in her editorial, the manifest lack of an imagined and hoped for wide spectrum of articles on soundscape education, is probably a significant part of the explanation for why AFAE membership is languishing (especially if—and I don't know if this is the case—WFAE and other affiliate membership numbers are also on the decline elsewhere).

We need to reach out to all the disciplines and interests Hildegard mentioned. A task of formidable scope! So, priorities need to be set—initially perhaps those areas with direct impacts on the sonic and general environments, such as urban design, architecture, industrial design, acoustic engineering, environmental science; environmental educators too, primary, secondary and tertiary.

The WFAE Symposium here (for details see p. 27) would be a great thing in many ways, not the least being as an inspiration for more members to join the AFAE.

I imagine that present membership is mainly Melbourne-based. Which is fine, an organisation has to start somewhere! I also imagine that most, if not all, current members are city-based. To truly be an Australian Forum, we need geographical, cultural and disciplinary diversity—not something that will happen overnight.

Inherent in a small membership base is a tendency towards casual and informal communications which by their nature only reach those already in the loop. The more informality the better as far as I'm concerned, but not at the expense of organisational atrophy and restricted contacts! A regular (but not too formal) structure of meetings and communications would be wonderful. This means work, and again there is the Catch 22 of a lack of people to do this work due to the small membership.

One idea would be a regular meeting/dinner, maybe three-monthly or even monthly, held on a particular day/time (7pm on 1st Tuesday, or whatever). Like your *Resonance* series (see AFAE report *Soundscape*, Volume 1, Number 2, p. 5), there could be a particular speaker or topic, and discussion could continue on over a meal. Non-members with a particular expertise or interest in the topic could be

invited to attend, perhaps presenting the topic themselves (e.g. an EPA representative might be invited to discuss noise issues). In this way, we would also increase awareness of the AFAE amongst a wider spectrum of disciplines and interests. Members from interstate would also have a standing invitation for the times when they are in Melbourne. Non-Melbourne members should also be encouraged to hold regular get-togethers in their own cities, with Melbourne people having a standing invitation to attend.

Letters to the press would help stimulate public debate on current sound, and 'noise' issues would also increase our public profile, particularly if they were 'official' communications from a 'lobby group'. Airport and traffic noise stories always offer scope for letters to the press (disturbing the peace, health effects, environmental pollution, property values).

Another initiative (and again one which can easily and economically have a wider circulation than just AFAE members) could be a regular email newsletter. This could include details of forthcoming meetings and events; articles or transcripts about topics discussed at previous meetings; letters; articles or items both solicited and unsolicited. Being in electronic form, it could also include sound files. This is something I would be pleased to edit/co-ordinate.

It would be wonderful to create enough momentum and debate on sound issues to generate community enthusiasm for a national 'day of quiet' (as in Finland). I am also happy to contribute to organising such an event. Particularly as reflections on the interplay between quietness, sound and being fascinate me. Somatic acoustic ecology. How the outer sounds of the world and the inner sounds we generate through our body and voice act to create internal states of being whose resonances evoke multi-sensual experiences and inspirations. Sound as a kinaesthetic trigger in various domains, e.g. psychological (evocative of childhood or other memories), artistic (singers/musicians inspiration and performance states), practical (emergency sirens, acoustic 'signage' for the blind), spiritual (sacred music and instruments, 'wild' sounds of biotic and abiotic environment).

John Hopper
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Current Research

Fragrances of Time and Space: An Omniscape Installation



Illustration No. 1: “Mississauga Point circa 1600”. Visual excerpt from the installation *Fragrances of Time and Space*. This is the artists’ reconstruction of how Mississauga Point could have appeared to the observer circa 1600. It is a 360 degree Quick Time Virtual Reality composite image, constructed from several photographs “stitched together,” taken in the Kingston region, and giving access to aspects of the soundscape. The image “places” the observer on the pebble beach next to Lake Ontario.

Introduction

Fragrances of Time and Space is an interactive multimedia installation enabling the visitor to travel the fabric of time and space by means of an “omniscape,” i.e., the combination of soundscape and visual landscape. Through the use of digital imagery and sound, the visitor may explore an acoustic/visual space focusing on a small piece of contested land formerly called Mississauga Point, and currently known as Block D, located in Kingston, Ontario. This site is located on a spit of limestone shoreline, which was extended in later years to allow for continual expansion of industrialization.

Fragrances of Time and Space has been in gestation for a long time. It started out as an idea during conversations with members of the Kingston artistic community regarding the creation of a site specific work of art about Block D; as well—and to a greater degree—a single conversation we had with Phil Quatrocci renewed our interest and increased our determination to create a work dedicated to this site. During the following years the idea stayed with us and congealed into an ongoing discussion about the intrinsic aspects of land, the passage of time, and how to capture and illustrate these changes.

Conceptually, the title of the work, *Fragrances of Time and Space*, uses fragrance as a metaphor for memory, since our olfactory memories tend to be the most precise and longest lasting. Since we are unable to reproduce actual fragrances in this work with our current technology, the “omniscape” is used to deliver the concept of “fragrances” to the visitor.

Fragrances of Time and Space is dedicated to Phil Quatrocci and to his vision of Block D as an International Peace Garden.

Historical Significance

As an inherently nomadic species, human beings tend to make transient use of land; Mississauga Point is no exception. In the past 400 years, Mississauga Point has served a variety of purposes; starting as a mixed arboreal St. Lawrence Lowlands forest, it became an aboriginal hunting ground, an aboriginal encampment, a proposed military fortification, a locomotive plant, a parking lot, a temporary residence for homeless people, a peace garden, a proposed super marina and finally, the proposed site for mixed development, including condominiums, sports arena and performing arts center.

From this varied history of Mississauga Point spread over four hundred years, we have chosen three “slices of time” to present by means of the installation to the visitor.

The first slice of time represented by the installation is around 1600, when Mississauga Point was a mixed forest facing Lake Ontario. The visitor sees a dense, nearly impenetrable forest, surrounded by a pebbly beach leading to the lake. The soundscape consists of wave and water action on a limestone rich shoreline, as well as the calls of various birds, amphibians and mammals which inhabited the region in that era. (See Illustration No.1: “Mississaugua Point circa 1600.”)

The next representative slice of time is circa 1900, when Mississauga Point had reached its industrial stage. From 1854 to 1968 this was the site of a locomotive plant, known as the Canadian Locomotive Company. The omniscape experienced by the visitor includes various machinery, assembly halls, workers and locomotive products, as well as huge steam powered engines from



Image by Robert Mulder 2002

the nearby pump station. The soundscape specifically includes a variety of machines such as steam powered engines and whistles.

The final time slice is the current era, i.e., post industrial Mississauga Point. The visitor navigates through an almost abandoned piece of land surrounded by high rises; in the distance one sees Kingston's City Hall as part of the Kingston skyline. As the visitor navigates through this aural and temporal space, she hears the sounds of cars, boats, and the song of birds currently inhabiting the region; as well, sounds from the nearby Kingston market are heard. (See Illustration No.2 : "Mississauga Point/Block D circa 2000.")

Related Environmental and Political Issues

Mississauga Point, or "Block D" as it is currently called, continues to be a point of contention. Certain citizens' groups would like to see this area made into a natural park; others would like to see the area developed into a multi-use facility including housing, a sports arena and an arts center. Through the last number of years there has been a power struggle between the various citizens groups, the city council and private developers, each with their own perspective regarding the future of Block D. As such, the continued struggle and ultimate resolution of the issues surrounding Block D reflects the growing pains of the city of Kingston. Like most communities, Kingston consists of numerous diverse groups of people, each with their own vision of the future. As the visitor to the installation explores the various aural and visual landmarks of this region as well as the historical, environmental, social and political issues surrounding this region, it is hoped that she will also derive a unique perspective of this vibrant and continually evolving community.

The Significance of the Soundscape Component

The use of the soundscape element is a crucial factor in our current work. Most Western ears are tuned to a twenty-first century

soundscape laden with density and dynamics; but even within such a multi-faceted mechanistic soundscape we are able to organize a plethora of sounds into music, noise, message or waste. Within this perceived framework of sound, we constantly assess, reassess, prioritize and contemplate possible interaction and responses to the surrounding acoustic landscape. It is one of the goals of our sound installation that the visitor become more aware of this ongoing process of evaluation, prioritization and categorization, thus ultimately providing the listener with a greater sense of empowerment over her acoustic surroundings.

Media Technologies Used

The installation has six or more strategically placed speakers and one woofer, connected to a small audio mixer. The computer and source file servers are external to the installation. A Wacom graphics tablet placed in the center of the room is the interface to the work. The screen image, projected with a high-resolution video projector, functions as an interface and feedback device to the user's explorations.

We use Macromedia Authorware 6 authoring software to create the interactive framework; this object oriented authoring software is ideal for the rapid development of complex multimedia/database systems. The completed program supports hotspots, hyperlinks, buttons and hot objects connected to data libraries. The data libraries in turn hold various media objects such as images and audio objects. The application also allows for the creation of "behavior libraries" which contain updateable "behaviors" assigned to particular sections of auditory memory space. Each media object connects to its own behavior in the behavior library, which will affect the unique delivery of each sound. For example, if the visitor clicks on the image of an abandoned canoe, she can hear the sounds of bare feet on moss behind her; in another instance, the sound of bare feet on moss may be heard receding into the far distance, depending on the context that the sound is heard in the visual landscape.

Current Research (continued)



Image by Robert Mulder 2002

Illustration No 2: "Mississauga Point / Block D circa 2000". Visual excerpt from the installation *Fragrances of Time and Space*. This is a 360 degree Quick Time Virtual Reality composite image, constructed from several photographs "stitched together," taken at the Block D location, and giving access to aspects of the soundscape. This image "places" the observer approximately .3 kilometers from the shore of Lake Ontario.

The installation *Fragrances of Time and Space* may also be perceived as a non-linear narrative. The interaction between the installation and the visitors will occur via a projected video image on which various areas and objects are gateways to other parts of the world. These gateways are "hotspots" attached to objects on the screen such as rocks, tree stumps, flowers, trees, vehicles, wheels, benches, windows, nests, etc. Visitors' interaction with these gateways or hotspots will usually result in a modification of various aspects of the soundscape and visual landscape. In such an atmosphere, an observant traveler will cautiously select from the many objects that appear in view, and will contemplate what the consequences of particular actions could have on the present soundscape or omniscapes. The result is that many visitors will create their own experience, and will contemplate the phenomena of *Fragrances of Time and Space* on their own terms.

Outcomes

The creators of this installation would like the visitor to acquire a better understanding of the historical, environmental, sociological and political issues involved in the ongoing development of Block D, and to initiate a dialogue on the subject of physical, mental, visual and aural displacement. Above all, however, we would like to create a space that allows the visitor to explore an inner perception and belief system, and to have her evolve a unique experience based on personal gestures of behavior.

Future Work

The next step is to broaden the scope of the original installation. This will be accomplished in a number of ways, some of which are outlined below.

First, more sites will be added to the original installation, in terms of both physical and temporal locations. So far the installation includes only Block D. In the future, however, other sites from Kingston and the Kingston region will be included. One of the key sites we would like to add to future installations is Kingston Mills, located approximately five kilometers outside of the city of Kingston on the Rideau Canal. This is a site with a particularly interesting historical past, as well as a place which

continues to have significance in the continued development of the Kingston community. We would also like to add an ice age section as a "cap" to either end of the timeline, in order to suggest the sense of long term cyclical progression.

Secondly, the original sound component of the installation will be increased to include a larger array of environmental sounds; as well, the soundscape, in connection with the behavior libraries, will be expanded to include sounds presented in three dimensional acoustical space and will utilize three dimensional spatial location in order to further immerse the visitor in the omniscapes.

One version of this future installation of *Fragrances of Time and Space* will be presented at the Agnes Etherington Art Gallery in Kingston from March until April of 2003; this version will also include a component created by the students of Queen Elizabeth Vocational Institute. With the artists' guidance, the students will plan a sound walk through various areas of the city of Kingston; upon completion of the sound walk, the students will participate in an educational workshop to create compositions using recordings from the sound walk. Along with the soundscape compositions, the students will create artwork based on their experiences during the sound walk. Both the compositions and artwork will be presented at the Agnes Etherington Gallery as part of the complete "Fragrances of Time" installation.

Conclusion

The continued evolution of the *Fragrances of Time and Space* installation mirrors the continued development and evolution of the Kingston community and its surroundings.

It is hoped that the process of navigation through the omniscapes of the installation will help the visitor attain a better understanding of herself and her surroundings in the perceptual universe, as well as provide a perspective on the continued growth and development of a complex and vital community.

Robert Mulder is an independent multidisciplinary artist with a passion for real-time interaction of light and sound.

Kristi Allik is a composer of electroacoustic music, acoustic music and multimedia. She currently teaches in the School of Music at Queen's University in Kingston, Ontario, Canada.

Questionnaire

In order to highlight the varying relationships to acoustic ecology in the age of digital networks, a questionnaire was sent out to individuals in the field of acoustic ecology and soundscape studies, as well as to artists, musicians, and writers whose work, however indirectly, overlaps with or contends with technologies and the environment. The following is a compilation of answers received. We would like to extend our thanks to those who responded.

Dear friends, dear colleagues!

We, Brandon LaBelle and Sabine Breitsameter, are preparing a new issue of *Soundscape—The Journal of Acoustic Ecology*, which intends to shed some more light onto the multi-layered relationship between soundscape/acoustic ecology and digital technologies/digital networks. We suppose that there are many possibilities to conceive and live that relationship, aesthetically as well as in theoretical discourse, or in everyday life practice. This is why we invite you to answer these questions. Also, we are asking a number of people not explicitly related with the soundscape community to give us their opinions. We hope that by collecting what we expect to be a multitude of answers, this will help widen the horizon of acoustic ecology and soundscape in the age of new electroacoustic spaces of digital networks and multimedia data spaces. We will publish an evaluation of your answers in *Soundscape*.

1. What does the idea of acoustic ecology mean to you? Does it represent a value, which is—implicitly or explicitly—part of your work? Or does your artistic/discursive/scientific work relate rather to the idea of soundscape/ environmental or spatial sound?

Eric Leonardson: The idea of acoustic ecology supports my interest in the science and art of acoustic phenomena and electroacoustic media. It automatically draws my interest as an interdisciplinary field. My personal experience is served by its ideas. The soundscape of my urban working and living environment is very active, informative, and intrusive. I can't ignore it. What I have learned from soundscape studies makes me sensitive, both intellectually and emotionally, to how my environment affects me, and inevitably these sounds, in recorded form, constitute the material that I often use. Acoustic ecology has had a crucial influence on how I use this material, regardless of whether the artistic aim is to produce a work that could be classified as a soundscape composition, or not.

Barry Truax: Acoustic ecology presents a model for understanding how humans can relate (positively) to their acoustic environment, as well as how problems can arise when that relationship deteriorates. Soundscape composition (for me) represents a kind of artistic presentation where the positive aspects, and hence appreciation, of acoustic environments can be experienced—a kind of “virtual ecology”.

Atau Tanaka: Although I come from a musical direction, my interest has always been to put established musical practice in question, at the same time calling upon musical instinct to parse new media potentials. So as I put notes, rhythm, and functional harmony in question as musical bases, I call upon counterpoint to shape sound. In my theoretical work, I seek new relationships we can create with sound, not via intermediaries of musical structure and form, but directly with acoustical phenomena.

John Levack Drever: I often opt for the term soundscape studies as opposed to acoustic ecology—it is less loaded. The importance for me is that meeting point that is made possible between architects, sound designers, musicians, psychologists, urbanologists, ecologists, geographers, anthropologists, sound engineers, biologists, audiologists, teachers, environmental health, acousticians, the Media, et al. The crossovers that are happening right now are unprecedented. Although my background is in music, my practice can lend itself to these disciplines and vice versa. There is no great acoustic ecology mission in my work—that does not interest me. The biggest statement that I hope I can get across is, how amazing everyday sound is.

Ed Osborn: I use a rather wide definition of the term “acoustic ecology” that refers to the balance of sounds in a given context no matter where a given sound comes from. I try not to classify sounds using either a good/bad or useful/not useful framework. I only judge what seems appropriate for a given context. There are times and places where one can listen to very quiet sounds, whether they are human generated or not. There are also times and places where one can be enveloped by 100 decibels or more of sound in both the “natural” and “built” environments. In either case there is an appropriate balance of sounds within each context; since both situations are part of the contemporary world I don't want to see one of these contexts dominate another. That said I don't tend to use a lot of specifically environmental or soundscape-type sounds in my work nor do I really focus much on the found acoustic environment. But some of the concerns about creating or maintaining a workable sonic terrain that is found in some acoustic ecology research and practice does provide an occasional reference point as I make new works.

Chris Salter: An all encompassing relationship between the physics of sound, hearing, perception (epistemology) and being/experience (ontology). As sound perception could be considered the most dynamic of the senses, such is then the relation between inside and outside the ear.

Justin Winkler: I am rather skeptical of the term Acoustic Ecology itself, just because it is too value-laden. Therefore I prefer personally the term Soundscape Studies. The latter expresses the

fact that it is not about a unitary subject but about transdisciplinary approaches. Physical environment and environment-as-perceived are fundamentally different dimensions, and this is not adequately implied by ecology notions which tend to lean towards the natural sciences.

John Hudak: My work is informed by acoustic ecology as an awareness of the acoustic environment. I am very aware of my particular acoustic environment. In New York, there tends to be an abundance of mechanical sound, mostly related to transport, emergency, or building maintenance (fans, transformers, elevators, etc.). So while I'd love to be more directly affected by country/nature sounds, the man-made city sounds are too much present for me to ignore.

Rahma Khazam: Acoustic ecology is a relatively recent area of research that focuses on the environmental usefulness/relevance of day-to-day sounds, as opposed to their aesthetic value. It is an approach that is favoured by a limited circle of practitioners—many artists who incorporate environmental sounds in their work remain unaware of the notions underlying acoustic ecology or shy away from its implicit message. My work generally relates to the idea of soundscape because it is far more prevalent than acoustic ecology. However I follow developments in acoustic ecology with great interest: it is a new and thought-provoking field of study whose parameters have yet to be properly defined.

2. In what way does the use of digital technology and networks shape/communicate your idea of soundscape/acoustic ecology?—In what way does your use of digital technology enhance the result of your work?

Atau Tanaka: Digital technology permits reproducibility, which in itself would be poorly suited to make rich organic soundscapes. Networks create a time indeterminacy that brings life back to digital signals. However, network sound is manifested only at its extremities, the true richness of sound diaspora inside the networks is difficult to perceive at their surface access points.

Nigel Helyer: It is easy to simplify notions of acoustic ecology aligning it with notions of the 'environment' be they natural or urban. However we are now experiencing entirely new sub-species of acoustic ecologies (or perhaps niche ecologies). These have grown out of the early broadcast media (especially radio and early cable wireless) but now exist in the diaspora of portable music, net radio and cell-phone jingles. Take a look at www.magnusopus.com for an example of an acoustic niche!

Barry Truax: Digital technology is the best means to realize virtual soundscapes, both in the way sound can be recorded, processed and assembled, and in the way it can be presented spatially (e.g. computer-controlled diffusion).

Eric Leonardson: If by a digital network you mean simply access to email and the web, and how that effects my efforts, it has proven itself to be an essential communicating and networking tool. As a production tool digital audio technologies have improved the technical quality, and enabled me to be more flexible in how I use sound. My ideas can be realized in a practicable and material way. From this point ideas develop or advance.

Ed Osborn: I use digital technologies all the time in producing my work, for producing and shaping sounds and running the mechanical aspects of my pieces. Certainly it makes many things possible that with prior generations of technologies were difficult or impossible. I can't really think about doing my work without these digital tools, and apart from it now being easier to avoid tape hiss I don't think of it as enhancing the results of my work, it is just somewhat easier to produce now than it used to be.

John Levack Drever: Networks are absolutely crucial. The *Sound Practice* conference at Dartington in 2001 was organised on no budget, with all the networking been done primarily on the Internet. It would not have been possible otherwise. I spend most of my time in front of a computer as part of my practice. However, my time is probably better spent concentrating on sound recording rather than audio manipulation in the computer.

John Hudak: Digital technology is a tool I use for recording and manipulating my sound work. It makes my creative process quicker and easier, besides providing a world-wide presence.

Chris Salter: The work is inseparable from the technologies, whether they are digital, linguistic, grammatical or economic.

Christine McCombe: Technology has been a useful tool as a means of 'capturing' environmental sound. Without my DAT recorder I would not have created the work I have. And once I am in the studio, digital technology becomes a way for me to recontextualise and manipulate my found sounds. Digital technology opens up all kinds of new sound worlds but these sound worlds always stem from 'real' recorded sounds—this is always my starting point. For me technology is a tool and not a love affair.

3. Is there a point where digital technology and digital networks contradict or limit your work/its intentions/your values? Please describe in what way.

Gabriele Proy: The question of copyright—I decide very consciously which sound art I'd like to present on the web and which compositions I'd never present there.

Barry Truax: No, it seems to be quite the opposite: digital technology provides the framework for realizing new ideas and processes in soundscape composition. Keep in mind, though, I speak as a composer/software developer for whom digital technology remains an open-ended and extensible medium. I realize that many "users" of technology may feel more constrained.

Justin Winkler: I was quickly confronted with the fact how digital technology is binding you into the "economics of aesthetics". Fast changing technological standards are basically not improvements but prevent any low-budget work. Yet they are valuable for solving a host of archive questions.

Rahma Khazam: The main limitations of digital technology are its artificiality and its lack of flexibility and spontaneity. These factors run contrary to the notion of the soundscape.

Eric Leonardson: Only to the extent that my live performance and theater work cannot be fully represented via digital networks, I have no expectations or disappointments about its limitations. It's simply a different medium.

Nigel Helyer: Perhaps such a conflict occurs when the conceptual thrust of the work concerns notions of 'direct' experience, of say, a phenomenon or architecture. Or, in situations in which we value experiential over representational modes. Whilst digital technology is perfectly suited to sophisticated forms of "reproduction" it sometimes fails to deliver that which is primal in the relationship between sounds and their mechanical sources.

Christine McCombe: As far as digital technology goes, I am only limited by my lack of expertise. Usually it is a case of the technology opening up new possibilities. And if the piece I want to make doesn't suit the technology, I find another way of making it. Sometimes the piece needs a person to play it rather than a machine. As far as digital networks/web art goes, I have no experience in this area and at this stage it doesn't interest me greatly (although this may change as I find out more). The main issue for me is the quality of the sound and having some level of control over these parameters.

Ed Osborn: There are always assumptions built into digital tools that may or may not be in line with one's own (the note-on note-off model of MIDI messages is but one of these assumptions). Probably the biggest limitation for me is the time it takes to learn a new piece of equipment or software—staying current with the newer technologies (and, of course, the ideas behind them) is always time-consuming. Obviously it is impossible to keep up with everything and it is possible to work happily with tools that have aged somewhat (I do this all the time). But part of the obligation I make for myself in my practice is to keep up with the current discourse around digital technologies. The tools with which I and others work come with lots of built-in biases. I find it important to understand what these are, so I don't adopt them blindly in my work.

John Levack Drever: I am aware of the way the particular software and hardware prescribes ways of working. However, I suppose I fall into the trap just as much as anyone else. I am aware of the negative ecological, social and cultural impact that working with the latest Macintosh computers, etc. have on the world. However, this does not stop me.

John Hudak: No.

Chris Salter: The increasing complexity of understanding and the steep learning curves associated with the built-in self obsolescence of technologies contributes to a constant wild goose chase. We are like infants attempting to walk, grasping around that which is not ready for us. The technology of the ear, however, way surpasses the technology of the digitDigital technology has many years before it will catch up...

4. In what way does digital technology open up deeper possibilities for understanding/realizing/ communicating/shaping ideas of soundscape and acoustic ecology?

Rahma Khazam: Modeling soundscapes, developing techniques for assessing and evaluating the quality of soundscapes.

John Hudak: Digital technology multiplies the possibilities of hearing and experiencing sound ideas one might not easily be exposed to due to one's place on the planet. Through digital

technology, I can listen to crickets from Australia, bats from New Mexico, or stone masons in Egypt.

Atau Tanaka: None.

Christine McCombe: The main attraction that digital technology holds for me is the ability to mobilize sound. To move a sound around a space, or to place a sound in a new and challenging context, to give that sound a life of its own and a new imaginary world in which it can exist. For me, sound shapes experience and technology allows me to shape sound in ways that I cannot begin to imagine or define.

John Levack Drever: Digital technology is primarily about communication systems. Sound has been slow to be taken up do to technicalities, however it is being taken up more and more. The WWW may become a very noisy place very soon. Notions of acoustic ecology will be key in the development of the whole discipline of sound design.

Ed Osborn: The quality of sound reproduction that can be achieved with the right equipment today is very high, and perhaps some of this can be used to create environments for attentive listening. It is possible to induce people to listen closely without any technology, of course, but in an era of technological spectacles it doesn't hurt to have a really good sound system on hand when discussing the possibilities inherent in the practice of close listening. On the other hand one can also note how much more clearly one can hear the world nearby when the spinning hard drives and computer fans have been shut off.

Justin Winkler: Internet communication is the only advantage that comes to my mind.

Gabriele Proy: A portable DAT recorder is much easier to carry than an old recording machine. So, digital technology helps me to record sounds and to listen to and analyse these recorded sounds later. Besides recording specific sound environments I make notes about the context of these recorded sounds and also which recording equipment I used.

5. How could acoustic ecology open the horizon of digital technologies? (Can acoustic ecology provide a productive lens for understanding and using digital technologies?)

Eric Leonardson: Under the present economic and social system, beyond creating value and serving markets, I'm not sure at this time.

Nigel Helyer: Yes—we need to transcend the original definitions of ecology as simply relating to the (mundane) environment that we experience on a daily basis (usually in a careless manner). If we employ digital technology to listen to the acoustic world of phenomena and events beyond the range of our (limited) sensory perception, then we are beginning to understand what ecology really means.

Ed Osborn: The practice of acoustic ecology is based in part on using sound as a barometer indicating the health of a particular environment. While sound might not be the right avenue to measure the health of digital environments (and the human

environments that they shape), the process of listening and evaluation that is part of acoustic ecology could be used as a model for looking at and listening to digital technologies.

John Hudak: As 5.1 Surround Sound and other methods of sound delivery become more available and less expensive, I see environmental simulations, at least acoustic-wise, becoming much more prevalent in the upcoming years.

Chris Salter: In the way that any ecology (particularly when we discuss acoustic ecology, in the Barry Truax sense of the word) is a complex and interactive system, where perturbations in one part of the system dynamically affect others as well, such is the way we should perceive our relation to the aural world...in particular, as we shift more towards constructing interactive and responsive systems that evoke seemingly “natural” processes...

Gabriele Proy: The reflection on sound and its context is the concept of soundscape. Yes, acoustic ecology provides a productive lens for understanding and using digital technologies. Terms like atoms, keynotes, signals and symbols are great tools to analyse sound design for consumer products and sound design in electronic media. Schafer also describes the change of our acoustic environment by electroacoustic media. His term ‘schizophonia’ describes the separation of the recorded and reproduced sound from its original sonic source. I think Schafer’s critique should be regarded as relevant to soundscape research only and not for sound art. The possibilities of fixation and reproduction of sounds enable artists to organize sounds in various ways. How we select and compose sounds is a question of artistic freedom.

Christine McCombe: The tool shapes the task and the task shapes the tool.

Justin Winkler: Yes, it could. But I had to complain and still complain that most producers (composers etc.) are unaware of the economic and political implications of using digital technology—e.g. the reformulation of copyright questions is left exclusively to the distributors who are apt to find and impose solutions completely contrary to basic acoustic ecology thought.

Barry Truax: Acoustic ecology can provide counter-examples to some of the trends of digital technology that de-emphasize sound and aural awareness. Whereas digital technology disembodies everything it processes and turns it into “information”, acoustic ecology reminds us of our connectedness to an embodied soundscape, and the environment in general.

Rahma Khazam: Inasmuch as it puts digital technology to new and innovative uses.

Atau Tanaka: The potential exists, but early efforts will forcibly be reduced to allegorical reference. True insight comes only after we have endured true suffering under the digital age.

Biographical Information:

John Levack Drever: I am an electroacoustic music composer trained in acousmatic music composition. My work spans from dealing explicitly with environmental sound recordings about a particular place, to working with abstract sounds with overall musical concerns. I also do sound design for devised theatre in a group called Blind Ditch. For the past year I have been coordinating *Sounding Dartmoor* in collaboration with TESE and Aune Head Arts. This project has been looking at the sounds of Dartmoor and engaging its inhabitants in a dialogue about their sounds. The people who live there are seen as the experts. I am

spending more and more time doing field recordings, but the question is how to deal with these recordings once I have got them.

John Hudak: My artistic approach involves finding sources of artistic expression from within nature and the environment, using digital tools to detect, quantify, magnify and illuminate natural information, with the ultimate goal of allowing people access, awareness and appreciation of the hidden aspects of our world. I use a computer not only as a tool, but also as a microphone/microscope/lens: an amplifier of our world, which stands in contrast to popular myths of the computer as an alienating, dehumanizing element of our time. In my work, I use information derived from the world around me as the basis for transformative interpretations in sound and video that invite the listener/viewer to experience the world in new and provocative ways.

Rahma Khazam is a freelance music journalist specializing in sound art. She is currently the Chief Editor of *Earshot*, the journal of the UK and Ireland Soundscape Community (UKISC).

Eric Leonardson: Chicago-based audio artist, composer, sound designer, instrument inventor, performer; co-founder of Experimental Sound Studio and Plasticene; interests in radio and live performance with a basis in electroacoustic sound.

Christine McCombe: I am a composer of electroacoustic music and soundscapes as well as music for more traditional media—i.e. for instruments, voice etc. I enjoy working with visual artists and collaboration is my preferred way of working.

Ed Osborn: The main part of my current work is in sound installation, but I have also made works for performance, radio, and the Internet recently. The sound installations usually include a combination of motion and sound that appears organic in nature and has a tangible physical presence. In some works there are sculptural objects that resemble aberrant animals and move and generate sound concurrently, their actions coming from a system of internal logic.

Gabriele Proy: I’m a composer and sound artist living in Vienna, Austria. I’ve studied composition and computer music at the Vienna University for Music and Performing Art. I’m composing electroacoustic soundscape pieces and sound installations. I’m teaching Sound(scape) Composition and Sound Design at the Vienna University, at the Krems Danube-University and at the Nuernberg School for Radiotechnology. Since 2001 I have been the president of the Forum Klanglandschaft (FKL).

Atau Tanaka: I am working with interface technology to build new musical instruments and network infrastructures to create new social dynamics for music. At times these streams join to create extended instruments for multimodal installation/performance across hybrid space. I am a composer for these media, and also a scientific researcher investigating our relationship with sound in everyday life.

Barry Truax: Electroacoustic composer and acoustic communication teacher and researcher. Compositional work includes many soundscape compositions, about which several articles have been written. Brief description of work: developing new performance and design models in relationship to computational technology, sound, architecture and media; work in the areas of sound design, psychoacoustics, responsive architecture and interactive performance environments, interface design and information architecture and research into interdisciplinary working methodologies and structures.

Justin Winkler: Basel, professor for human geography, landscape history and aesthetics. I have done fieldwork on the perception of the sound environment in rural areas of Switzerland.

Recovering Narcissus: Sound and Touch in the Digital World

A telephone conversation between Derrick de Kerckhove and Tim Wilson



Tim Wilson:

You've been quoted as saying: "Networking and multimedia are giving us back an environmental perception." I'm wondering what you mean by that. Because, while it may be true that increased electronic intercourse and connectedness has given us a heightened sense of the mental environment, the cultural surround, even the global surround, I would have thought that it has in fact diminished our sense of the physical, natural world. Do you think that that's true?

Derrick de Kerckhove:

Yes and no. It's true and it's untrue. It's true in the sense that it's putting an emphasis on the cognitive environment, but it's untrue in the sense that all this interactivity is making us more tactile. Basically, my view of the whole thing is this: that in moving from the aural to the written society we lost our bodies. We started to repress them, and started to synthesize them into a sort of abstraction that was reorganizing our thoughts and our imagination.

But in fact physically we were separated from each other. And we distanced ourselves from the world of spectacle. We invented theatre, we invented theory, we invented everything except direct connection, direct contact with people and things. And in science, even the presence of the self is eliminated. And there is no more real interaction. People retire into their minds, their offices (and their libraries, as Montaigne was proud to say). But with

interactive systems we have been putting a new emphasis on tactility on the one hand and also on the physical interaction with the objects of our attention so that we're learning a lot more about the very thing that we didn't know much about before, which was the tactile sense.

What do you mean when you say "tactile"?

I mean feeling. Take pollution. Pollution is a tactile experience. The fact that the air is not empty but filled with stuff. The fact that we're surrounded by things that pressure us. Another example is body language.

Is it the same with sound? The aural sense and tactility are often grouped together, as in the term "audio-tactile," but you have qualified that. You describe this interactive surround as a "secondary" tactility.

Yes, it is. And to a certain extent that's the downside of the presence of the body. Secondary tactility is like secondary aurality. It's supported by electricity or electrical contraptions and amplified by it, but it is not the direct contact any more than we have a direct contact with our ears. Right now we use sampled sounds, we don't have sounds that come from the natural instrument. And so this is

a secondary level. It's like an elaboration on the auditory sense and the same thing goes for tactility.

But hasn't this had a drastic cost? If most of what we're receiving is in this secondary way, through electricity, through sampling, are we not distancing ourselves in a serious way from the same natural world that we're concerned about being polluted?

We are. There is definitely a distancing, although the growth of the cultural interaction between various peoples, the implosion of the world on itself, has this secondary tactile effect as well. That we are now pressured, literally invaded by everybody else, by every event. We can't live without being aware of things like a suicide bombing in Israel. It affects us physically. I mean I personally have responded to the last one, as to earlier ones, with a sense of horror, shock, and helplessness. And the world of news has this sort of what I call secondary tactility. It's a physical experience.

But is it the same sort of physical experience as if you had been next door to the restaurant or nightclub being blown up, and the windows of your home were blown out, and you were deafened by the experience?

No, that's different. That's a primary tactility. The secondary experience is as different as the difference between a generalization and a fact. Fear is a generalization response. That doesn't make it any less tangible.

This sounds analogous to what Murray Schafer calls "schizophonia," the splitting off of sounds from their sources, so that what we actually sense is far removed from where it originated. Is this remove another way of saying "secondary tactility"?

Yes. Absolutely. And in fact I'm not saying that secondary tactility is good any more than I'm saying secondary aurality is any good. But I'm not saying that it's bad, either. I'm not judging that. I'm just saying that that's the way it is.

We lost all our senses to the literate world, to the textuality of the abstract written word. We're recovering our senses, but instead of recovering them the way we had them in the aural pre-literate world, this secondary aurality is entirely fabricated, supported. It's a pseudo sense which is outside our body instead of the pseudo sense we had inside our body when using our imagination to read our novels.

Can you speculate about the difference between the pre-literate and post-literate person in terms of their relationship to the natural world, and specifically to the soundscape?

The soundscape is survival in the pre-literate world. Every sound is either a promise or a threat. Every sound represents something you must pay attention to. There is not the same level of filtering out a sound that we have, for example, in a city today. There, the standard literate person will tune out most traffic sounds, for example, because the sidewalks protect him or her, they more or less guarantee survival. But in a natural environment, you're constantly listening to what's coming. Sound becomes your lifeline, because everything's invisible in the jungle. You see so little, so you have to be constantly alert to the slightest tremor or change.

So I would say that the people of the pre-literate world have a very fine ear, better hearing. And the post-literate has simply cut down on the quality of hearing. You have only the frequency response that's needed to grab the meaning of words. That will be the priority, and the rest will be less important.

I love Greek mythology because it says it all. The story of Echo

and Narcissus is the story of the fall into silence, that's like what happened with alphabetization. The loss of Echo is the loss of the ear. The story, you'll remember, is that Narcissus is running after this girl, and she's playing hard to get. They're having a good time, it's spring and all that. And as he runs after her he trips on a branch, and he falls head over a brook, and sees this image of himself. And, the story says, he falls in love with himself. McLuhan made the point very clearly, though, that it's only we who say he fell in love with himself, because we have Freud and narcissism and all that in our mind. But in fact, having never *seen* himself, there was no reason for Narcissus to believe that it *was* himself. He was just totally fascinated by this abstraction of the visual representation of what was, a mere moment before, a multi-media, multi-sensory person.

Meanwhile, Echo is back right behind him thinking, "He's not running after me any more, not playing". And she calls out after him, and her voice bounces off into the distance. And he doesn't listen. He literally loses his hearing. That for me is the mythical moment where the alphabetic man loses connection with Nature, loses connection with the other senses. This is the kind of attitude that ushers in the Baroque period, where even touch will be simulated by vision with *trompe l'oeil* and so on, and the domination of the eye over all the other senses will be sealed and declared.

You remember the old eco-activist slogan "Think globally, act locally." Living in a world of essentially globalized sounds, where you can listen in Naples or Toronto to music from anywhere else: doesn't this increase the risk of being less present in the place where your body actually is, because your mind, your ears, your imagination are somewhere else?

No, I don't think so. For me, anyway, the experience of other sounds coming from other cultures has been a thrill all my life. I remember first listening to Arabic music on the radio, or the first time as a child I heard with enormous pleasure some reels from Scotland, with bagpipes. Or music from India. I was totally local, but at the same time I was fed with an exotic, different and mysterious sound.

What about the way the Walkman changed things? People started opting out of the soup, the sound pollution of their immediate environment and put their ears somewhere else.

Can you say that again? There is a lot of noise here.

I suspect your listening experience many years ago of those Scottish reels was different. You sat in front of a speaker. It became something of a concert. Now, when you clamp headphones on and walk with them down the street, instead of listening to the aural shit that you might be surrounded by, you take yourself off to somewhere else. And you also crank the volume up to overwhelm the sound around you.

Occasionally, yes. It turns you instantly into a film hero. Putting earphones on and listening to your own soundtrack turns you instantly into a hero from the movies. That music, whatever it is, you fit with your action, with whatever you're doing. You could be on a subway, going somewhere. It becomes heroic music. Or you're about to land in Spain and you put on music from Spain. You're clearly organizing yourself to become a Spaniard. It's fun, it's part of the fantasy life. And I amuse myself with putting on my own soundtrack.

The idea of providing one's own soundtrack is not a useless one. We have fantasy lives and we provide our own accompaniment to them. I think there is a lot more in common between the world of film, cinema, and that of the Walkman, this portable soundtrack, than is usually credited. Because after all, their stream

of consciousness, à la Virginia Woolf, goes on all the time. Every one of us has this stream of consciousness. If we put music to it, or if we put it to music, we're clearly doing something that is along the lines of the emotional structuring of a film. We 'de-realize' our lives by putting soundtracks to them, we make them less real. We lose touch with the shitty sound of the actual environment. But at the same time we are editing ourselves and our emotions to fit a certain kind of pattern that we're interested in.

I think, though, that the people who provide their own soundtracks in the way you're describing positively, become less attentive to the musical invasion from outside.

Yeah, they do, they definitely do. Today, the recovery of sound is something that requires a dedication. The kind of dedication that one finds in monasteries or with great musicians, or people removing themselves in some way. The thing that Murray Schafer speaks about. You have to get out of it. People go to the country to experience the silence of the country, and the songs of the birds. Like they want to see the stars at night because you can't do that from the city. You recover something. And a lot of people need that. To get out of the city perhaps means first and foremost to get out of its soundscape, and provide yourself with quietness.

Wait a second, the sound I'm getting is .. Hang in there, I'm just going to find a spot where I can hear you properly...

I had to turn my computer off just now so I could hear you.

Yeah, it irritates me. But there's a positive aspect to electronic sounds at least as they relate to music. They adapt us to new rhythms. Machines go faster and the music that goes along with those machines also goes faster. Disco music is faster than rock. And house and techno is faster than disco. And rave is faster than house and techno, so there's now an incremental speeding up of rhythms, and that's part of our education to the speed of those machines.

But is this a good thing for our bodies, which surely can't be adapting that quickly?

I don't know about that. I'm not concerned about it, because the speed of our bodies is also accelerated by cars and planes. These things speed up our lives, and the speed of communication as well, carrying cell phones around and being in touch on the Internet and having to answer 50 letters instead of three each day, this is part of an acceleration which requires adjustment to new rhythms. Where it will stop I don't know, but it seems that so far we've been able to handle the pressure. And there are some sounds of very high frequency, for example, sounds that can only be produced electronically, which I find really interesting. Not a deep beat, but a complex, crystalline quality. Like an electrical crystal. They're very subtle sounds, so you know there are some good things about this.

Let's talk about the technology of sound manipulation itself. In the past couple of decades we've developed, through computers, an extensive visualization of sound, the ability to manipulate individual sounds at almost a microscopic, certainly sub-phonemic level. And you remarked in an earlier conversation that the Greek atomists once philosophized that the phoneme was akin to the atom in being, the smallest undividable particle of reality. Well, people now edit sound visually and "smash" the phoneme easily. They look at the waveform on their screens and don't listen so carefully any more. The way I see that is as a kind of revenge of the organizing, linear eye upon the unruly, more "primitive" and chaotic ear. Is that what you think is going on?

That's very interesting. It also happens to bypass completely the writing system. It's a direct action on the sound itself instead of having to go through an interpretation of the sound, as in musical notation. And that breaks the distance between the sound and the self. I haven't given this objectification of sound much thought, but I would say that the visual medium here is not so much a revenge of the eye upon the ear, but rather it's a mechanization of the process itself. It's a new kind of distancing. But it also makes for a very strong precision.

The fact is that once you move sound from the analogue to the digital, you change completely your relationship to it. It's not a continuous, fluid production any more. It's a series of numbers, and you can do anything you want with those numbers, whether it's translating them into vision, or smell, tactile surfaces and textures, whatever. There are all kinds of ways you can access and modify it. Of course one question which arises from the changing ratio of direct to mediated sound in our environment is how far can the sampling of a digitized sound emulate the real thing? Will we one day discover that there is a health value, a spiritual value we're not getting?

I strongly suspect so. I think it's entirely possible that the arbitrary selection of 44.1 KHz as a sampling rate in first-generation CDs, which most of us still listen to, i.e. the elimination of all frequencies above 22 KHz, only a touch above a healthy young person's hearing, may be costing us something transcendent, something vital. That there's subtle spiritual information "up there" which spills into the audible realm, but can't if you block it out. It's just a suspicion, and I'd love to hear from others on this, but I sometimes wonder if that's why I don't enjoy the sound of digital over a long period of time, despite its terrific convenience. I also think that digital manipulation of sounds, which is virtually a sorcery, is an expression of the urge to control something which has been primordially uncontrollable, i.e. the mystery and fluidity of sound.

But that's everything, that's life itself. Look what we're doing with the genetic code. We're basically in a situation right now where we're inverting the roles of nature and culture. Until recently, culture was under the domination of nature. You always had to deal with the natural. From the time of the Pill until now, we haven't ceased to conquer Nature and to impose the laws of culture on it. Now that we're rewriting the genetic code with cloning and such, the order of precedence has changed. We did a big flip.

And is this a positive development?

I don't know. Are we going to have to suffer for it in a dramatic way, or is this part of the natural evolution of a huge and extraordinary cognitive progress that's happening now and that Pierre Lévy calls "collective intelligence". I deal with *connective* intelligence, but it's just a branch of the *collective* intelligence that he's talking about. He says that our technology of information processing, whether it's sound or text or images, has improved to the extent that we now have to suspect that something much larger than the individual will be actually expressing itself through society: innovating, discovering machines and changing things completely.

Prof. Derrick de Kerckhove is Director of the McLuhan Program in Culture and Technology at the University of Toronto. His latest publication is: *The Architecture of Intelligence* (Birkhäuser 2001).

Tim Wilson is a radio and television documentary producer, writer and lecturer. His essay on sound, technology and ecology, *One Man's Noise*, is to be featured on CBC Radio's IDEAS series in the winter of 2002.



Musical Information Networks

By Bill Fontana

I began creating acoustic networks of sounds as the aesthetic basis of my work in the mid 1970s. At this time, digital technology did not exist. These analog networks were guided by aesthetic ideas about the inherent musicality of sound in the environment. It was, and still is my belief that the world at any given moment contains unimaginable acoustic complexity. My methodology has been to express this wide horizon of possibilities as a spatial grid of simultaneous listening points that relay real time acoustic data to a common listening zone. Since 1976, I have called such musical information strategies, sound sculptures.

The earliest works were temporary networks realised with mobile 8 channel recorders. *Kirribilli Wharf* (Sydney, 1976) was the first successful work in the genre, and marked a turning point. In the middle of the night, I went with an outside broadcast van to a floating concrete pier in Sydney Harbor that had vertical

cylindrical holes going from the deck to the underside. The movement of waves would close the bottom ends of these holes creating compression waves. These were audible by means of microphones placed in the openings of these holes (8 were used). The recording that ensued revealed a highly musical wave map defined by the changing percussive rhythms of the simultaneously miked blowholes. This array of microphones was a musical information network that revealed a complex result not discernible from any individual point taken separately.

From mobile 8 channel recordings that sampled 30 to 60 minutes of real time in the life of an acoustic situation, it was easy to make the leap to using analogue (broadcast quality) telephone lines and wireless communications to investigate the simultaneity of sound in the wider acoustic situation of a landscape. These installations covered greater distances and time scales that fur-

ther expanded the conceptual envelope of connecting multiple spatial points to a single defined listening zone.

From 1979 to 1992 I produced a large number of installations in the U.S., Europe, Australia and Japan that explored and developed the idea of creating musical information networks. These all used the analogue transmission technologies of the time, and had the general structural form of connecting multiple points to a single zone. In 1983 the Brooklyn Bridge was 100 years old, and I created my most ambitious acoustic network to date, by relaying the live singing sounds of the steel grid roadway of the Bridge to four locations simultaneously: the facade of the World Trade Center, the observation Terrace of the World Trade Center, the Brooklyn Museum and the public radio station in New York, WNYC.

In 1987 I realized the *Cologne San Francisco Sound Bridge*. In this project there were installations existing in both Cologne and San Francisco that for one hour were linked by satellite and played all over Europe, the USA and Canada on radio. The Cologne installation was a live sound portrait of the city, with microphones at 16 locations in Cologne, with loudspeakers on the facade of the Cologne Cathedral and other rooftops surrounding Roncalliplatz. The San Francisco installation was a live duet between the Golden Gate Bridge and the Farallon Islands National Wildlife Refuge (which lies 30 nautical miles west of the Bridge) – this was heard at the San Francisco Museum of Modern Art.

If digital networks had existed when these projects were realized it would not have changed the immediate experience at the receiving zones, except to have had much better sound quality. The other dimension that would have been interesting is today's possibility to create web versions of these projects, where people could navigate the many individual sound source locations, and generate their own mixes of the material.

A very recent project, *Tidal Waves* (Kingston Upon Hull, UK, 2002) is an example of an acoustic network that uses the simplest analogue technology to achieve a sophisticated result. Hull is located on the estuary of the Humber river and the North Sea. It has extreme tidal variations of 12 to 15 meters. There is an abandoned jetty on the Humber, that is a four story steel structure. I used this situation to create an acoustic tide gauge in which disk shaped hydrophones are mounted on each of the three levels. During a high tide, when they are completely submerged, one hears the water moving through the structure. During a low tide, when none of these are submerged, the hydrophones become accelerometers and hear interior structural sounds of the jetty. As the tides ebb and flow, this musical network is slowly changing between these two acoustic polarities. Something that is remarkable in Hull, is that the town has its own telephone company. In order to achieve the transmission of my work to the Maritime Museum, the phone company installed 4 twisted pairs of copper wire, point to point, with no signal conditioning equipment. With the help of a good engineer, we installed 12 to 1 transformers at each end of the line, and had a very high quality analogue signal.

In terms of the future of my work, the basic aesthetic of creating a musical information network from multiple sound locations in the environment is still a valid way to work. The digital enhancements to this will be multiple receiving sites, an interactive web presence for the works and the possibility to have interactive relationships between transmission and receiving sites.

Bill Fontana: San Francisco (1947) is one of the internationally most renowned sound artists. His work's essential characteristics is that it is telematic, relaying soundscapes of cities and other specific environments with the original soundscapes of a given listening environment. More info: <http://www.resoundings.org/>



Photography by Bill Fontana.



Top left: Microphone and Transmitter in Venice
Top right: Parabolic Microphone in Normandy
Bottom right: Hydrophone in Hull

Digital Arts' Black Sheep

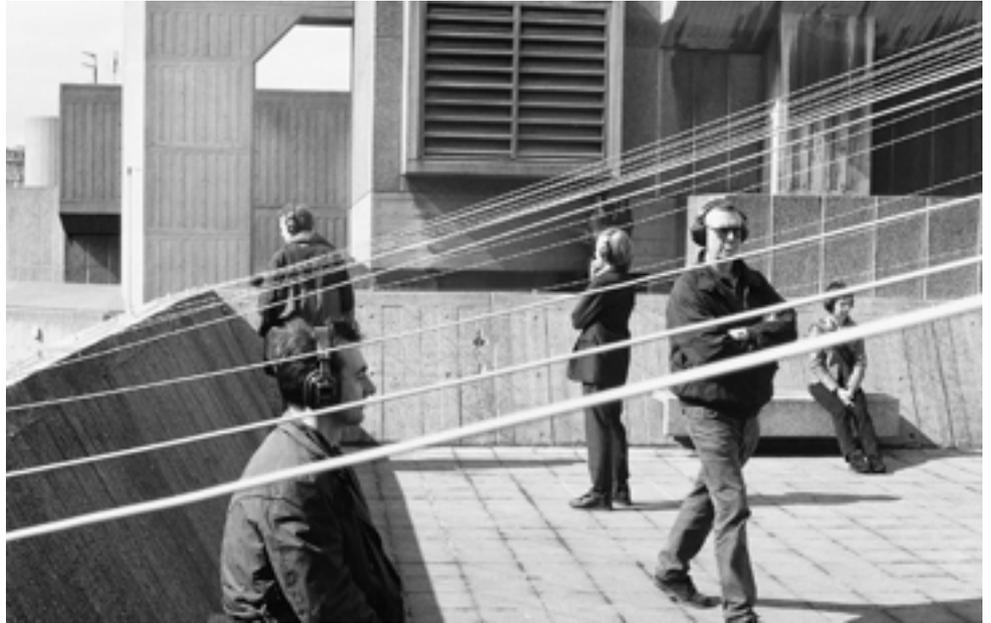
By Christina Kubisch

Contrary to the plethora of festivals dealing with the digital arts, digital music and digital media, there is essentially little discussion about what the digital means to us. It seems the term 'digital' has a kind of magic attraction which nobody can resist. In this way, the digital is not only a technological development, but a quality as such, which does not seem to be questioned. As a musician who has started her artistic career with tape recorder reels and patch cords, who has moved faders and buttons and who has edited tape by hand, this is confusing. Analogue is out, odd in any case, and unfashionable. Who wants to be like that? It seems to me like a tribe which hides its genealogical tree, because otherwise the black sheep of the family has to be called by its name.

I have been producing sound installations for more than twenty years, mostly site specific, both indoors and outdoors. Today I am working with digital media, though in many ways I sense the hegemony of digital culture differently than somebody who has grown up with it as a matter of course. This ambiguous relationship is mirrored in my works, which do not only use computer but make them the topic of artistic reflection. How do nature and contemporary technology relate? How do they influence each other and our perception of nature? These are questions with which I see myself confronted and which have been occupying my work since the beginning.

I have been enjoying working outdoors, because sounds of nature fascinate me more than instrumental sounds. At the beginning of the 80s I made large installations in forests and parks. Trees and plants were wrapped with electrical yellow-green cables and visitors wandered around with special induction-headphones. They listened, depending on their movements and the paths they took, to sounds in the air, by the trees, between the plants, along walls, fences and even in water and from underneath the soil. It was left to their own perception to decide whether these sounds actually existed in space or were produced through induction-loops of the cabled nature. Through this not only their auditory awareness was sharpened, but the visual sense as well.

If I listen to something attentively I give to it a very different visual awareness. These installations, such as *The Magnetic Garden* (1983, Vienna) or *Listen to the Walls* (1982, Lyon) consisted of concrete sounds or homemade electronic devices, that produced sound material. The result, however, was so similar to the existing natural sounds on site that the difference between true and false was difficult to determine. Often visitors lifted off their headphones to

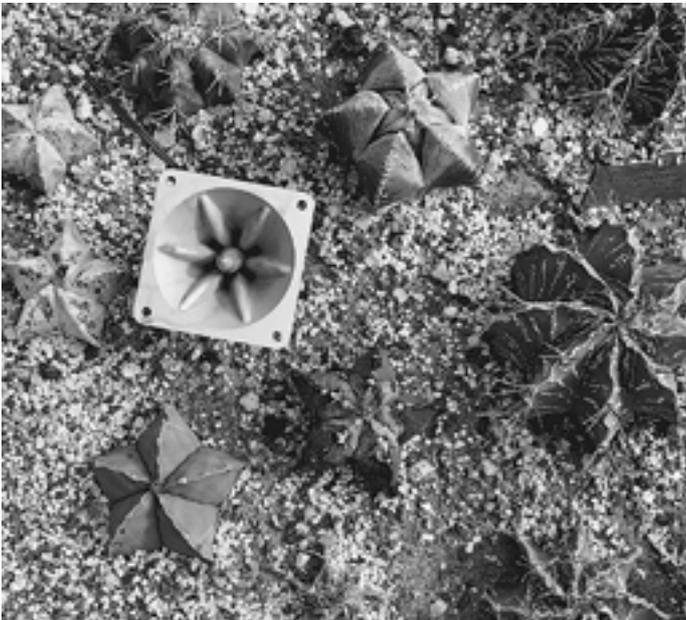


Oasis 2000 - music for a concrete jungle, Hayward Gallery, London, 2000

listen with sharpened attentiveness to the familiar environment. Memories of earlier listening experiences were awakened.

Other works, which started in the pre-digital era, are based on sounds generated through the energy of solar cells: they save light, change it to electricity, feeding different sound generating devices. In the beginning this was cheap electronic trash. For example small alarm buzzers: if you didn't supply them correctly with electricity they sounded like insects or frogs or cicadas. These installations, presented in natural settings, interacted with the sounds of the environment. At times it happened that birds started to imitate the electronic buzzers, hinting at new and unexpected languages. In later works I used memory chips and computer controlled programs, but the quality was different because the variation of sound did not depend on any lack of quality of the devices used, but instead on the technical perfection of the digital control and the quantity and quality of the recorded materials. This contradiction has led to the development of specially designed devices, as in the solar-energy projects, that work without digital technology, react directly to light and produce for me still stunning sound combinations.

The idea to connect artificial sounds with real ones occurred at a time when the 'electronic' meant the 'new' and the 'real' was thought as directly perceivable in nature. Since the development of digital media, and through my different styles of working, these categories have shifted. Today all nature is available on demand. Every imaginable sound in nature is recorded, saved, and not only our familiar environment, but locations distant from us. While the first recorded songs of whales had been rare, they are available today with relaxation music, mixed with ocean waves and



Random Neighbours, greenhouses Pflanzen und Blumen, Hamburg, 1994



Magnetic Garden, Göteborgs Konsthall, Gothenburg, Sweden, 2001

Photography by Dieter Scheyhing and Giacomo Oteri

jungle birds, at the supermarket in a value pack. Knowing that data is available immediately creates the illusion that such information is somehow familiar, as if by direct experience. Such archival material, as in recordings of nature, are closer to us than its original. To many people the digital and synthetically produced and processed sounds of nature simply sound "better".

Recent installations of mine deal with this contradiction of synthetically reproduced auditory paradises. These installations (such as *Oasis 2000*, London Hayward Gallery, and *Le Jardin Magnétique*, Paris, Cité de la Musique, 2001) consist of arrangements of artificial plants. What is audible in these installations (again by induction-headphones) are, however, nature sounds of such an unusual character that most visitors believe they are electronically or artificially designed. But in truth such sounds are simply rare, mostly ignored or completely banal. As a result, when they are heard in the installation or artificial garden, they produce surprising effects of curiosity, strangeness or humour.

If we have to summarize my works in categories, I wouldn't hesitate to name it all "digital art". However, I try to present digital and non-digital reality as a way to confuse and to arrive at new definitions: to put the natural world in opposition to an artificial one which seems more familiar than the natural; or to relate the artificial world to a natural situation which appears stranger than the artificial.

My most digitally based work in this sense is probably *Mausware* (1998). On a round table lie ten computer-mice from various years; their cables are connected to real mice from a natural scientific institute, immersed in formaldehyde. From ten loudspeakers hidden under a table a tripping sound can be heard, a scraping, gnawing and scratching, which reminds the audience of the activities of mice in an empty old house. The audio of the

installation consists of recordings I made for many months of people working at their computers. These recordings were made by attaching a contact microphone to the person's mouse. Every digital worker showed his or her individuality by their special way of using the mouse. Quickly, slowly, nervous or even violently. Ten sound-structures of these recordings form the acoustic canvas of the mouse table, and rarely anybody has doubted the animal origin of the sounds.

Each medium creates its own clichés and is not by definition good or bad. Digital art has many facets, but its development does not only occur on a technological level. Therefore I find it necessary and indispensable to discuss critically the medium and its possibilities of use—but not in the sense of placing technology in opposition to ecology, or virtual art in opposition to real acoustic environments. Definitions are always limiting. The limitation set by purely digital festivals with purely digital art and digital announcements and digital tickets is not exactly exciting. Such events seem to me like the already mentioned tribe without a genealogical tree and the black sheep. (Translation by Sabine Breitsameter/Brandon LaBelle)

Christina Kubisch was born in Bremen/Germany in 1948. She belongs to the first generation of sound artists and has gained high international reputation. Trained as a composer, she has artistically developed such techniques as the magnetic induction to realize her sound installations. Kubisch has been a professor of sculpture and audio/visual arts at the Academy of Fine Arts, Saarbrücken, since 1994 and a member of the Akademie der Künste, Berlin, since 1987. She lives in Berlin. For more information see: <http://www.christinakubisch.de>

Sharing Experiences Towards the Possibility of an Electroacoustic Ecology

By Andra McCartney

As I write this article, I am crossing Canada by train. Here I am even more aware than usual of my dependence on technology in order to do my work. I search through the cars for electrical outlets, and watch my battery level dwindling. Yesterday, while charging up the minidisk in the lounge car to do some more soundscape recording, I heard a group of urban twenty-somethings talking about the isolation they felt from their daily lives on this trip. They spoke of the comfort of a Walkman to avoid boredom and assert a connection to home through music, and wished that VIA Rail provided music in the bar car. Then the conversation turned to the problem of musical choice, and how one person's preferences might dominate the sound environment.

As an acoustic ecologist, I am concerned about the way mainstream popular music blankets almost all acoustic environments. One of my joys of the last day has been scanning the radio dial, and hearing mostly snow or white noise, like the snow that surrounds the northern Ontario track we travel on. This is one place that is not dominated by an American top forty sensibility, and like Murray Schafer, I am glad of the predominance of snow in this environment.

But still I search for the outlets. My concern about excessive machine noise, amplification, microwave immersion and reliance on computer technologies does not stop me from working on this laptop and carrying a microphone and recorder to most places I go. It also does not prevent me from making radio works and multimedia installations that radically split sounds from their home environment, creating schizophrenic experiences. My practice is intimately connected with technology, and I want to believe that it is possible to use electroacoustic technologies to bring people closer to their sound environments, even while playing back sounds that are from far away. I want to believe in the possibility of an electroacoustic ecology. In the balance of this article, I will describe my current practice, and leave you to question whether this is indeed possible, or whether I am dreaming.

My work with sounds usually begins with recording the practice of everyday life: walking in the neighbourhood, travelling, working in the garden. I do these recordings in textual form, writing journals. As well, I use microphones and either DAT or minidisk technologies.

While recording and monitoring on headphones, I have an amplified perspective on my surroundings—at once closer to the environment as everything is amplified, but also separated from it as my experience is mediated by the microphone's perspective. It is

interesting to imagine having ears in other parts of my body, and to try to hear from there. I have worn microphones on my belt, my boots, and extended them to the end of their cables above my head like antennae. The kind of microphone also affects the interaction I have with other people in the place. When I wear the binaurals on my headphones, I resemble some kind of demented cyborg insect: people tend to look away politely, no doubt thinking „poor thing, she must have lost her mind!“ When I wear microphones elsewhere on my clothing, they are less conspicuous, and people might think that I am listening to music. When I carry a larger stereo mic in my hand, people often ask if I am videotaping. It is odd for many people to see a lone audio recorder with a microphone.

This is not an innocent encounter. Using focus and perspective, it is possible to alter the dynamic hierarchy of sounds within a place. The microphone's ability to amplify allows me to discover and focus on the subtle sonic emanations of very small sounds, those too quiet to be heard normally, to elevate them into hearing range, to change their social place in a soundscape, to make their previously-masked sounds audible. I use the microphone to construct a particular experience which may alter the social places of various sounds, and within which my motion is traced as I go.

Then I take these sounds, select excerpts of them, process some of them, re-combine them with the texts and sometimes with still photographs, and mount them on websites or install them in galleries, often far from the original place of recording. People may experience these schizophrenic installations in the public spaces of computer labs or art galleries, or in the privacy of their living rooms. I hope that even though the sounds are shorn from their moorings, their recontextualization through these processes of reflection will carry enough meaning to keep them afloat and connect with aspects of the local sound environments of my distributed audiences. I hope most of all that visitors to my installations will find sustenance there, an acoustic appetizer to inform their own practices of acoustic ecology in their daily lives. While suspicious of the way computer technology encourages me to slice and dice sounds to conform to bandwidth restrictions, I am hopeful about its potential of creating virtual communities as well as of its possibilities to share experiences.

Andra McCartney is an artist, researcher and teacher, involved in soundscape studies and practice, working as assistant professor in the Communication Studies Department at Concordia University in Montreal/Canada.

What the Travelling Ear Hears

Pachuca, Hidalgo, Mexico

By Annie Marges

They trained me to be a historian, to engage in discussions of “place” and “space” in their historical and cultural contexts. And now I am finally *living* within the “place” I have studied for so long. And what I have found is that, while I can live in this “place” the “space” has inhabited me.

I returned to the Mexico I have been in love with my entire life. And it is here, in Pachuca, Hidalgo, that I absorb, like a sponge, all that I see, hear, touch, smell and taste.

Perhaps the most profound manner in which I feel my soul being inhabited is through the constant melody of sounds that provide the soundtrack to daily life here. Whistles singing, horns honking, voices announcing the arrival of their wares, the rhythmic patter of soccer balls on knees, feet, elbows, concrete. And while the encounter of such sounds is not necessarily foreign to my ears from North of the border, the particular combination or orchestration here is unlike anything I have ever experienced.

Wake up Saturday morning and the concert begins. Introduction: the slide-whistle of the balloon man, growing to a *mezzo-piano* as he rounds the corner out in front of my apartment and the giant faces of Tigger, Pooh and Mickey Mouse float by the window. He is then joined by the steady whistle of the knife sharpener on his bicycle, *pianissimo*, providing another dimension, if not harmony, to the interlude. Joining the chorus every morning—and then presenting a solo again every night—is the tamale man whose voice announces his arrival long before he reaches the sidewalks around the park underneath my living room window. He yells, “TAMAAAAAAA-LEEEEEEEEEEEEEES,” over and over, as he walks his cart around our streets. Then begins the horn section. The gas truck is first, *mezzo forte*, and as its song trails off into the neighborhood across the park, the horns of the water truck emerge from the other end. The finale is performed, perhaps appropriately, by the garbage man, broadcasting the arrival of the garbage truck with his high-pitched bell, ringing his steady *mezzo-forte* message (three days a week).

After the music stops, the percussion section appears in the bodies of young boys and girls dribbling their soccer balls down the street, to the basketball court in the park. The rhythm of the sound of hard leather slapping the pavement calls others to play.

And every Saturday is the same. I get a free ticket to the concert of *Constitución*, my neighborhood, which is unwittingly filled with street performers. It is through that weekly performance that I am connected to this place, and through the ritual that it is connected to me. I react to its rhythms, I follow the cultural choreography, and I have become a dancer on its stage. Its music has penetrated my consciousness and there it will reside after I have left, not tucked away like the photographs I have taken, but in my waking, in my ears, as I notice its absence.

Annie Marges is a native of Oregon and has an MA in Mexican History. She has recently taught 5th grade English in Pachuca, Hidalgo, Mexico.



Photography by Sonja Ruebsaat

Hampi, Karnataka, India

By Jony Easterby

The town is really a single street amongst the vast ruins of a 13th century civilization set in a boulder strewn landscape of epic proportions. Waking before sunrise to hushed voices in a strange language, I wash and wander out into the streets, conspicuous with my headphones and crossed microphones.

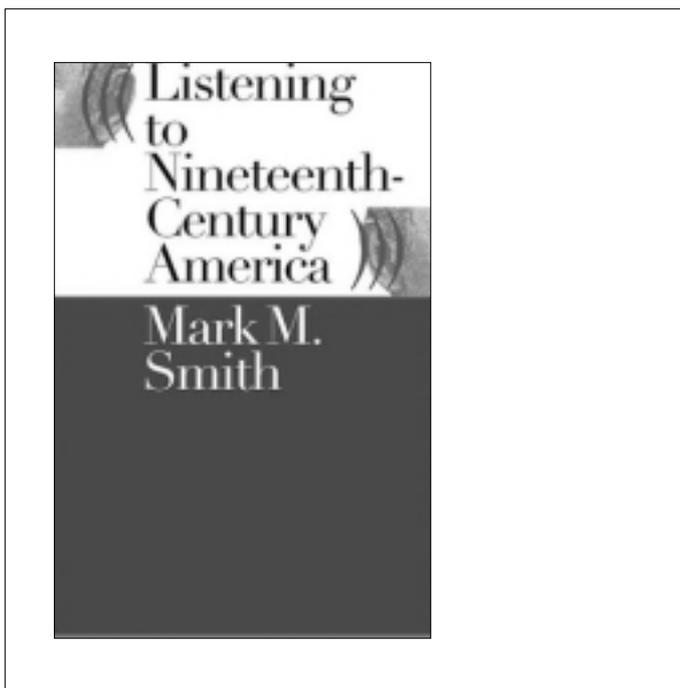
The sound of early morning in India is that of sweeping. Stiff grass brushes, bunched in the hand, sweep dusty mud pavements and shop entrances, the splash of water on earth as buckets of water are emptied with cups, early morning conversations between mothers and children. Distant voices, “Photo? Pen?” A cockerel crows. The faint sound of motorbikes and radio music appear as I near the high street, chanting, flutes, cymbals, children, and the light crunching of my sandals on the dusty ground. Birds are singing in the trees along the length of the street.

As I near the huge temple at the end of the street the music blocks out all other sounds. Moving to the side of the temple complex, monkeys whoop and scream as they career around the towers and walls. A pack of dogs growl and scurry past, narrowly missing a passing moped before erupting into a chorus of yelps and cries as they begin a fight. I take fright as some of them seem to be spooked by my microphones, overloading my recording levels. I beat a retreat. Then a strangely familiar and nauseous sound enters the mix, the gunning of a far away diesel engine and the crashing of gears. Not just any bus this, but the impossible to forget sound memory of a nightmare 14 hour overnight bus journey from hell, returning to town 48 hours later to haunt me.

Time to leave the High Street. I walk through the back streets, hearing voices through open, glass-less windows, the soft baying of buffaloes and cattle, the scampering of chickens and children, through the banana plantations towards the river. Along a dusty road a bullock cart creaks up the hill; bells of different sizes accompany its grinding wheels, the call and encouragement of its driver is met by tranquil bird song, and the gurgling of the river.

Jony Easterby lives in Wales, UK, and is active on the Management Committee of the United Kingdom & Ireland Soundscape Community (UKISC).

Book Review



Listening to Nineteenth Century America

By Mark M. Smith. Chapel Hill and London:
University of North Carolina Press, 2001.

Reviewed by Norbert Ruebsaat

When a southern slave owner in the pre-civil war USA wanted to control his slaves he attached bells to their bodies. The bells were held in place by a metal band welded around the slave's waist, by another band welded around the slave's neck and by a curved metal rod which extended three feet above the slave's head and held the actual bells. The bells were far enough away from the slave's body so that he (or she) could not reach them with his or her hands and stuff mud into them and thereby mute them—which wearers of earlier, experimental models of slave bells did—and so when a slave escaped, the sound of the bells always gave away his presence. It also, when the slave was trying to survive by, for example, catching turtles, prevented him from doing so because the clanging of the bells scared the turtles away. Unable to forage, the slave starved.

When he was caught, which he usually was, the slave encountered other sounds. The first, a prelude to his capture, was the baying of the bloodhounds and the yells and curses of the slavers. Once back on the plantation the slave experienced the keynotes of the ante-bellum southern soundscape: the crack of the whip on his (or her) back, the groan and cries of his own suffering body, the wailing of his fellow slaves, and the clang of the chains into which, after the whipping, he would be clasped to prevent further escape attempts.

It was these keynotes, writes Mark M. Smith, by which plantation owners controlled their soundscape. They imagined it not as a soundscape of suffering, but as an "agrarian idyll composed of quietude, harmony and peaceful solemnity." They, the slave owners, contrasted this soundscape with the noisy, machine-throbbing, mob-howling, industrial free wage labour soundscape of

the North and found their southern one to be superior because it was closer to God's idea about Nature. The North, to them, meant noise and chaos; the South was composed, harmonious, "a finely-tuned balance of sounds and silence."

Other slave sounds were more complex. The "Negroes' singing," for example, carried contradictory meanings. On the one hand it signaled to the listening plantation master that his slaves were content, and could also produce "noises pleasant even to the civilized ear," and on the other it signaled the possibility that the "Negroes'" songs held coded messages inciting revolt or escape plans. The "silence of the Negroes"—Smith elaborately demonstrates how slaves deployed both sound and silence to contest their masters' acoustic hegemony—was also ambiguous. It signaled, on the one hand that the slaves were "restive," and on the other that they were "silently plotting." Slaves used silence to stalk and eavesdrop on their masters, just as the masters used sound to eavesdrop on their slaves, and the slaves used sound—often music—to distract their masters, just as the masters used silence—their own deafness to slavery's agonized sounds—to distract their slaves and themselves from the slavery's reality.

The pre-civil war southern plantation becomes, in Smith's narrative, a devil's kitchen of strategic listening and silencing, sound-making and sound suppression, which in Northern US abolitionist ears signaled a kind of madness. This listening produced, in the North, its own kind of sound. It produced, first of all, the "clamour of the abolitionists' voices," which, rising into the high registers where articulations of religious zeal find their truth, were painful to southern ears, so much so that the latter labeled them "Devil's cries." Secondly, it produced sounds, and, more importantly, a way of listening to them that, had these sounds existed without the antiphony of the Southern soundscape, would have carried less power than they did. These sounds were of course the sounds of industrialization, mechanization, and the corresponding human sounds of the masses of free wage labourers clamouring for recognition, power, authority, wealth, and, the magic word, "democracy." "Acoustic democracy," writes Smith, became memorably joined, in the "Yankee" ear, with the "throb of machinery," the "humming of engines," the "pulse of industrial might" the "strict, orderly, periodic peel of factory bells and whistles." These sounds, as history has let it be heard, proved stronger than "Rebel" calls for a soundscape formed from "the soft swish of wind through the cottonwoods, mixed with the whir of cicadas, and punctuated by the distant, happy singing of the Negroes in the fields,"—a soundscape that they considered their God-given, balanced right and which did not contain the sounds of said Negroes daily groans and weeping.

The bell is a keynote, a signal, and a soundmark in *Listening to Nineteenth Century America*. Smith does good work in translating Murray Schafer's Soundscape terminology into a historical and cultural framework which does not leave sound isolated from its receiving mix of senses and the societies composed by them. The bell that marked the escaped slave's body and thereby signaled his location to the cursing, bloodhound-driving master resonates the Liberty Bell which, as national soundmark, signals the global location and now political hegemony of the United States of America whose "freedom," George Bush intones with pulsing zeal, is envied by all other nations. The bell that ordered the slaves' work rhythms in the cotton fields is the kin of the bell that announced the commencement and end of religious worship. The

same bell signaled the beginnings, breaks and ends in northern factory work shifts and the beginning, middle and ends of northern religious services. And it can be said, I think, that this nineteenth century European keynote (that is much older, of course) transcended and in doing so transgressed the boundary between church and state which was the rallying cry for the American Republic. The factory bell was of course replaced later in the century by the factory whistle, thereby, perhaps, resolving this issue.

I still heard “the bell” in my early school years in rural British Columbia where I was told by its sound where to be when; in grade six it was replaced by “the buzzer.” A mechanical keynote and signal became an electrical one. The bell, of course, is a European instrument, and its African equivalent is the drum. Along with the voice, this drum, to which Smith draws attention by correctly noting its suppression as a plantation communication device, is now, of course a keynote of American and, some people say, “world” popular music in the electrified mode. The extent to which it signals freedom or enslavement is still debated by clamorous voices in numerous locations, schizophrenic and otherwise; discussion about the degree to which the electrified voice can at all engage in balanced and equitable debate, is another soundscape riddle, of course, and the source of numerous sound ripples which will continue to envelop the globe.

Smith’s work in this book is ear opening because he dares to recall the past to us as composition. The “heard past,” he calls it. His research, especially of aural, and among these, especially of slave sources, is exhaustive and at times exhausting to read when marshaled, as it is here, in combination with a dense texture academic prose, and an eighty-page apparatus of footnotes and bibliography, which produced, in this reader at least, a cacophony bordering on chaos. In a fine, final, methodological chapter, though, Smith guides the reader eloquently through the theoretical cadences by which he arrived, by way of Soundscape Theory and Acoustic and Psychoacoustic Theory at Cultural Studies and Communication Theory as forms for understanding the sociology, aesthetics, politics and ethics of sound-and-listening. His mind’s tuned fork can be heard humming here:

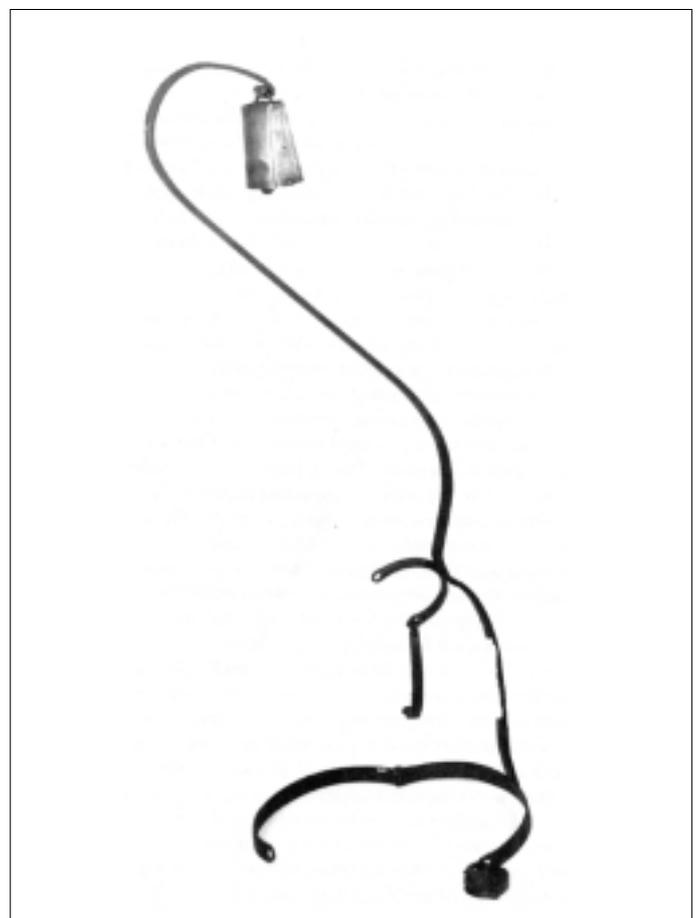
By some definitions, noise is simply any aperiodic signal, but by this standard, transistor radios cannot be considered noise. Describing noise more qualitatively as an “imbalance” in the soundscape or as “unwanted sound,” begs questions. By whose hearing is it an imbalance? By whose definition is it unwanted? Even the argument that noise is invariably pejorative is misleading. We still speak of quiet noises, for example, and Psalm 95:2 counsels us to ‘make a joyful noise unto the Lord.’ Inevitably, then, we must deal with noise in the aggregate. Noise is unwanted sound, and the trick is to identify who considered it wanted and unwanted and why in a specific historical context. None of this was lost on nineteenth-century Americans.

Indeed. It may, however, be getting lost on us. What I found remarkable in the hundred thousand and one citations Smith musters was how diligently people in the last century listened to and spoke about sound. People heard things and worried about them and spoke about them clamorously. The question of whose sound was whose noise led, as Smith clearly tells it, to the American Civil War, the first fully mechanized human war. The bells, in their hundreds of thousands, became cannons whose “thunder” the still-tuned ears of front line soldiers report, “can only be likened to

the thunder of nature.” Those soldiers and the citizens of the South in whose soundscape the war was fought heard sounds that had never been heard before, sounds of all-encompassing, all-enveloping carnage whose “continuous din” was the harbinger of all subsequent modern carnages in which this man-made “thunder,” masking the groans and cries of civilians and soldiers who died in their hundreds of thousands, would become the keynote.

I am surprised and heartened how much attention Smith’s sources, and how much attention Smith, in passing on the word, give to the world of sound. I am disheartened, and, sadly, less surprised, at the lack of attention traditional “visually biased” historians have paid to sound historiography. If the selective listening of ante-bellum southern plantation owners forms one extreme—at whose edge George Bush with his ear tuned to his speechwriters’ slogans and rendered deaf thereby to the cries of Middle Eastern children might be said to linger—the selected deafness of print-fixated historians moves only hesitantly and arrhythmically toward a middle ground which Smith, reporting back from the front lines of the heard past, attempts to scream into existence. He calls himself a “historian of aurality,” and he calls his method “acoustemology,” which is an ugly word that perhaps, like other repressed noisy cries, needs, for a while at least, to be listened to.

Norbert Ruebsaat writes for newspapers, magazines and radio and teaches Communication and Media Studies at Simon Fraser University and Columbia College in Vancouver.



Belling slave bodies (Historical Society of Pennsylvania, Slave Harness, accession no. 1000.1214)

Short Reviews of Various Artistic Works

By Sabine Breitsameter

Sauna 02

By The Sauna-Project Team (Erik Adigard, Laura Farabough, Amy Hoffman, Brad Niven, David Robert, Chris Salter, Sha Xin Wie)
<http://sponge.org/sauna02>

Sauna 02 was presented as a San Francisco multimedia installation, with immersive features, that posed two questions about the actual state of urban environments versus possible creative alternatives. First, how can we use media to create a contemplative, ambient oasis within the density of urban space? Second, how can we be immersed in the open space of the city, feeling the pulse and fluidity of the surrounding world without oversaturation?

An outdoor area along the 16th Street façade of the Redstone Building, where the LAB is located, was the site for the responsive-media installation. Three large cylinders mounted on the front of the building were illuminated inside by computer-controlled strobe lights. Visitors standing beneath the tubes were washed by waves of light and sound. The installation adapted itself to the changing 16th Street surroundings, and provided a source of solace and relief. Inside a behind-the-scenes exhibition showcased the project's three-year artistic and design process by way of notebooks, texts, video, sound, drawings, sketches and interactive media.

Public discourse was an inseparable part of *Sauna 02*. During the exhibition, every Wednesday evening public discussions took place with the project team, media artists, urban planners, politicians etc., as a way to illuminate the installation's topic from different points of view. "Urban Intervention" was one evening's topic, "The political economy of mediated urban space" was discussed during another round. We hope that this project, with its artistic and political reflections on urban environmental issues, will soon be presented in places all over the world.

The WeatherPlayer

By Owain Rich
<http://www.weatherplayer.com/>

Owain Rich is a young British developer and artist in his early twenties. *WeatherPlayer* is his first public work. It is an online audio installation designed to interpret atmospheric conditions as sound, generate music and broadcast it over the Internet. Light, temperature, wind and water sensors are positioned on top of the University of Brighton building. The resulting signals are converted into MIDI data, and transmitted to a computer program. The software, written in the Supercollider audio programming environment, uses the incoming data to

determine the structure of sound generating algorithms. The result is a composition with a cyclic structure which mirrors the light cycles of day and night, with sounds that rise and fall with the wind. *WeatherPlayer* is broadcasting 24/7 for a month as a RealAudio stream using the University of Brighton RealServer. Listening posts are located around the University of Brighton campus. The installation could be heard and seen during the first half of August 2002 at the Garage-Festival in Stralsund, Germany, from where it was streamed through the Internet 24 hours a day. Owain's compositional decisions, which he mapped to his programming, resulted in multi-layered, atmospheric music, which appears mostly harmonic and quiet, sometimes as complexly mixed pitches and timbres.

Working on the individual listener centered perspective in virtual space

Gerhard Eckel and his team
<http://listen.gmd.de/index2.html>

The Austrian composer Gerhard Eckel and his team work on an equivalent of the CAVE, a three-dimensional visual projection system, which gives every visitor his or her individual perspective according to his action and movements. Whereas the CAVE is giving a perfect visual illusion of space, Eckel works on improving this principle for listeners. It is still a work in progress. The research is done at GMD-labs near Bonn/Germany, with initial results already displayed on the website. There have been a few occasions during which the work has been presented to the public. Its technological sophistication is paralleled by profound reflections on its aesthetic purpose. "Illusionary audio landscapes surround the visitors. It is as if you are immersed in a world of sound that is constituted convincingly through sound sources that can be clearly localized. With subtlety and discretion the sound world works in the background and dissipates any doubts about the virtual world. The viewers feel as if they are part of the environment and at the same time independently acting subjects in it. Enclosed in the three-dimensional soundscape, that reacts to their movements, they develop a feeling of presence, of sensual certainty that makes them forget about the delusion." It is worthwhile following the project development by visiting the website every now and then.

Sabine Breitsameter is a Berlin based radio producer, festival curator and academic teacher involved in soundscape work, experimental radio and audio art in the digital networks.

Special Announcements

?... acoustic ecology ...? an International Symposium

March 19—23, 2003
Melbourne, Australia
<http://www.afae.org.au>

Presented by the World Forum for Acoustic Ecology
Hosted by the Australian Forum for Acoustic Ecology (AFAE),
the Victorian College of the Arts (VCA) and partners

Join us in Melbourne for a unique event which brings together the full range of issues and disciplines within the field of acoustic ecology: the relationship between living organisms and the sonic environment.

Main Themes:

ENVIRONMENT

bioacoustics, national parks, field recording - natural soundscape

TECHNOLOGY

audio industry, digital media, virtual reality - constructed soundscape

EDUCATION

pedagogy, resources, public programmes - considered soundscape

CULTURE

history, sound art, language, indigenous people - human soundscape

DESIGN

architecture, urban design, sound design- designed soundscape

International and Local Guests Include:

R. Murray Schafer (Canada) Composer/Author/Teacher
(confirmed)

Hildegard Westerkamp (Canada) Composer/Researcher/Teacher
(confirmed)

Elliott Berger (USA) E.A.R. Senior Scientist, Auditory Research
(EoI received)

Bruce Johnson (Sydney) Musician and Cultural Historian
(EoI received)

Preliminary Programme:

Invited presentations

Limited paper sessions

Workshops and Forums

Sound Installations

Soundwalks and social events

Dates:

Workshops, Paper Sessions: March 19—20, 2003

Presentations, Forums: March 21—23, 2003

Contact:

symposium2003@wfae.net

Travel - Accommodation - Tourism:

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mark@orbittravel.com.au

Call for Papers and Projects

a) theoretical papers, research reports

b) sound art, composition or installation reports

c) projects in the fields of design, architecture, urban design,
environmental planning, economics, politics

d) projects in the fields of new media, literature

Acoustic Ecology is a broad and multi-disciplined approach to the study of the acoustic environment. The central issue is the relationship between environment and the organisms which inhabit it. Historically sound artists and music practitioners have featured in the dialogue around acoustic ecology as they explore their sound world. There are many other people who study and employ the sound medium—engineers, scientists, bioacousticians, audiologists, psychologists, anthropologists, educators, designers and more.

The WFAE International Symposium seeks to provide a forum for the expression of this diverse range of knowledge, views and expertise and thereby find connections between them. Authors will be required to attend the event and should nominate their choice to be refereed or non-refereed by an international panel. Refereed papers will be published in the proceedings of the event while publication of non-refereed papers will be given consideration by the papers committee.

Professionals, academics, artists, scientists and others are invited to present research, artwork or projects in their field of expertise. Authors are encouraged to include clear references to the underlying principles of their field of interest as well as the relationship between their work and other disciplines within the field of acoustic ecology

ABSTRACTS: 500 words or less

FORMAT: Plain text or MS Word rtf file

SEND TO: Roger Alsop

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Production Centre

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Melbourne 3004, Victoria, Australia

E-mail: r.alsop@vca.unimelb.edu.au

CLOSING DATE FOR ABSTRACTS: October 14, 2002

ACCEPTANCES NOTIFIED: November 14, 2002

FINAL PAPERS DUE: February 3, 2003

SYMPOSIUM PAPER SESSIONS: March 19/20, 2003

For more information visit:

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Listening and Discovering: The Carbono Project in La Pampa, Argentina

By Claudia Salomon and Fabian Racca.

When concepts such as acoustic ecology, soundscape, deep listening, and soundwalking are integrated with educational processes, they become a useful basis for a series of experiences that emphasize the connection between individuals and their environment as well as to one another. This article introduces readers to the *Carbono Project* on which we are working in La Pampa, Argentina. Our goal is to show how we adapted a conceptual framework for the study of the acoustic environment to our specific situation and to the study of social structures.

We live in Toay, Argentina, some 6 kilometres away from Santa Rosa, a small city of 100,000 inhabitants, which in turn is about 600km south-west of Buenos Aires. Argentina is a so-called Third World country where the public infrastructure has been dismantled (Petrella, 1999) so that the State can pay off its external debt. This means that possibilities for employment and education are sparse and support for health and housing is almost non-existent. Basic services are provided less and less and cultural projects get very little encouragement. Formerly free universities are being privatized leaving many people unable to afford higher education (Daleo, 1998). Research is not encouraged and the government promotes competition among teachers for lecturing hours at ridiculously low wages.

As part of the “globalisation” process the mass media facilitates a policy of cultural hegemony resulting in non-critical and uniform ways of thinking, in individualism and a lack of solidarity, and a repression of spontaneous expressions, all of which subjugate nature and humankind (Garavaglia, 1993).

One of the consequences of such a policy is that the once spontaneous musical expressions in people’s daily home life, transmitted through aural tradition, do not find a place in the broadcast medium. According to research undertaken by Argentinean musicologist Ercilia Moreno Cha (1973-1975), it would be inconceivable to hear on radio today the

music of rural workers, for example, as the broadcast media provide mostly commercial music from outside and the role of the listener is conceived as that of a passive consumer.

The *Carbono Project* seeks to develop a series of events and ideas that arise from this specific geographic, mental and cultural space we inhabit, from our work and way of life itself. It is an interpretation of the world that does not endeavour to present itself as absolute or definitive, that nurtures and develops itself as part of a necessarily endless process. In general, our approach towards sonic experiences is based on a process of constant discovery. Access to music is not determined by technical skills on an instrument, but rather on one’s inclination and perception. It is never research for the purpose of being “original” but rather to be honest with what we value and enjoy in our lives and what is of real importance to us.

One of the main purposes of the *Carbono Project*, is to encourage practices beyond artistic and professional interests—as a way to include new values in our lives; to help us to communicate with each other more freely; to connect ourselves to our immediate surroundings; and to understand ourselves as a necessary part of a whole. In the *Carbono Project* we are interested in provoking unique sonic meetings of individuals of differing educational and social backgrounds.

This project has been taking shape through a combination of activities and processes: 1. Spontaneous and gradual development of experimentation with sounds and radio

languages for about 8 years on FM BDC 107.1Mhz in Santa Rosa. 2. Reading of books which explore concepts such as acoustic ecology and deep listening. 3. Access to archives containing folk recordings done with an anthropological approach. 4. A growing awareness of our environment and direct contact with nearby native forests. 5. Our adherence to political theories that emphasize equal rights, opportunities, access to basic resources, and right to be part of a Wajmapu.¹

If artistic experience is one method to discover reality—as science is, but in different ways—then listening to a certain ambience is



MAP OF ARGENTINA

- | | | |
|---------------|-----------------|------------|
| 1. Santa Rosa | 4. Realicó | 7. Rosario |
| 2. Toay | 5. Buenos Aires | |
| 3. Our House | 6. Cordoba | |

one way to explore it. As part of this project, we have been recording different aspects of sonic ambiances in La Pampa province, where we have lived for the last ten years and of which Santa Rosa is the capital city. We have recorded characteristic sounds of small rural towns like Realicó, its surroundings, the sound of social events in town, the sounds of the countryside and of the city. Some of these recordings were broadcast on FM BDC 107.²

The *Carbono Project* has had two stages so far. During the first stage, a series of recordings have been compiled (our own and those taken from archives). These have been formed into a series of concept programs to which we have given titles such as *Los Cuises*, *Rata Sonsa Trio*, *Crakin Guitar*, *Walkman Stereo*, *No Disc*, *Circuito Integrado*, etc. Our relationship to the instruments and soundmaking devices for these programs (guitar, CD players, cassette decks, turntables, different types of objects, and walkman among others) has developed in an intuitive way and from what the environment and the moment suggest. This method relates directly to experiences in our daily lives, which does not include access to professional and sophisticated technology. We make our living from common jobs (not related to our concerns with the soundscape) and our production is carried out with the means that our incomes allow. Thus, we use domestic recordings as a way to revive performances and as a learning method, that allows us to reflect on new ways to approach sound.

In the second stage of the project, we will attempt to:

- **enlarge and improve our Editing Centre**, to edit our own work and that of others that may join. In general, this will mean working with our improvisations, with field recordings of environments, of aural testimonies, of music made by people without commercial criteria, of sound experimentations, etc.
- **compile field recordings** on different aspects of our current Pampean soundscape.
- **carry out workshops** especially with children, that will attempt to transmit concepts related to basic human values, to the perception of sound, form and colour, in the hope to enrich their lives and to encourage them to observe their surroundings. In particular we will stress to value and respect nature. The concept of “deep listening” fits here as a perceptual practice: a series of soundwalks with children can be highly enriching, not only to them but also to us, if we take into account the fact that in the

teaching process, the teacher always has something to learn. The children will also be given the opportunity to participate in radio broadcasting and will be introduced to free explorations on musical instruments.

- to set in motion an **FM radio station** broadcasting on air and—if possible—on the Web. Such a station would not only serve as a forum to discuss ideas, or broadcast research information in history, anthropology, culture, or artistic works, but also as a creative tool in itself—trying to make contact with listeners and encouraging them to create their own recordings for broadcast. In this feedback process between radio and community we hope to discover opportunities, enlarge them and dig deeper into them, as they are opened up through precisely that interaction. Thus, we aim for radio to work as a *real* expression of our



Inside the rustic sound studio, La Pampa, Argentina.

community—instead of using it, like the commercial media does, as a means to homogenize cultures—as a celebration of the diversity in our culture, and as a door to others who may enrich us.

Education cannot be reduced to instruction received in colleges and universities. We believe therefore that these workshops, the editing center and the radio, that we expect to develop through the *Carbono Project* are important educational means for disseminating and spreading such skills and information to the rest of society.

Since the beginnings of the FM radio station we share these interests with a small group of friends. But we do not know of similar projects in our country. The social and economic crisis in Argentina has been accelerated since December 2001 and this affects not only the development of this project, but also its diffusion: a law that regulates FM transmissions, for example, states that to get a license, \$5000 USD has to be paid. Most Argentines—those who are lucky enough to have a more or less stable job—earn \$100 a month. Bear in mind

that the cost of living is around \$500 and that a field recorder currently costs u\$1000. That is why we use \$100 walkman recorders. It is not merely a question of numbers, but these figures show that projects like ours are very difficult to pursue in our country at this time.

Nevertheless, our idea is to get some sort of support (either institutional, or better, in \$\$\$) in order to reach the community through an FM radio station. Few people here have access to computers, the www, or to buying CDs, etc. So the diffusion of work through radio is one possible long-term way to reach out and develop the *Carbono Project* further.

Footnotes:

¹ A word from mapu dungum language, spoken by native Indians in this region. To be part of a Wajmapu means to be a part of a whole. In that

context human beings are just one part and not something separate from it. It is no coincidence that there are no words in Western culture to convey this concept: terms like “nature” and “natural environment” (“naturaleza” and “medioambiente” in Spanish) are conceived as something apart or even opposite from “culture”. Occidental thought tends to accept that human beings are the central element and the “environment” should surround us. Hence, whatever we produce with instruments, listening and recording of natural environments, our ways of speaking,

of sharing experiences with others, all this is part of soundscape, of the place in which we live and the web of relations within the Wajmapu.

² The FM radio station BDC 107.1mhz was closed in December 1996 due to legal problems, It had huge tax debts that it could not pay, since in Argentina, the state assumes that an FM radio station should be a good business and must be focused on commercial strategies. Our intention is to get a different license, but it is even more difficult now due to the current economic/social crisis.

Fabian O. Racca has participated in alternative radio programs for eight years, and during the last years, he has been focusing on exploring and recording soundscapes in La Pampa, either rural or urban, and linking this practice with educational techniques for developing improvisatory languages.

Claudia Salomon Bachelor and Professor in History, is currently researching the possibilities for a prospective PhD in indigenous societies in La Pampa and their relationship to the environment, focusing on ethnic identities and interethnic relations.

Photo courtesy of Claudia Salomon and Fabian Racca

Sound Bites

Seeing with Sound

The vOICe System invented by Peter B. L. Meijer, a computer engineer at Philips Research Laboratories in the Netherlands, translates images from a PC equipped webcam into sounds that an individual hears through stereo headphones which aid in navigation.

The method is still in the developmental stage but early tests indicate that the user hears sound elements which, with training, can be constructed into aural patterns that provide a sense of shape. The system does not convey depth perception and it cannot track moving objects. However, the software provides a resource that aids blind navigating. Source: *Tech Live*, April 2, 2002

Indiana Hum

Nearly 100 people in Kokomo, an industrial city of about 48,000 persons in Indiana, USA, have complained about a low-frequency hum. The unidentified sound is similar to that heard in the early 1990's in Taos, New Mexico and other places around the world.

The concern is that some people complain of a vibroacoustic disease that includes symptoms such as dizziness, headaches, and sometimes nausea.

The Kokomo City Council has approved a \$100,000 study of the hum, which is often described as the idling of a truck's diesel engine. Source: *The Associated Press*

Static as a hearing aid

Dr. Jay Rubinstein, associate professor of otology at the University of Iowa, has developed a process that adds noise into the audio signal of cochlear implants. The static noise stimulates the auditory nerve and increases the perceived dynamic range often allowing those who are deaf to hear lower frequency sound.

Rubinstein intends to improve the system to the point where deaf patients can hear and enjoy music. This will be a big improvement over current cochlear implants that limit the user to hearing spoken words in quiet settings. Source: www.wired.com

US Navy Wants Test of Sonic Detection Techniques

In order to keep track of enemy subs the US Navy wants to use acoustic technologies that many believe will be so loud that it can damage the hearing of whales.

According to William Wilgus, director of the Public Cause Network the level of underwater sound use will be the equivalent to that of a Saturn rocket lifting off, or more than 238 decibels.

The National Resources Defense Council (NRDC) has taken its objections of the Littoral Warfare Advanced Development to U.S. District Court. It argues that an environmental review is needed and guidelines must be developed. The US government argues that it is taking measures to protect underwater life. Source: www.wired.com

US Navy Sued Over New Sonars

The United States Navy says sonar use will be strictly controlled. But a coalition of environ-

mental groups led by the Natural Resources Defense Council is suing the US Navy and the National Marine Fisheries Service to prevent the deployment of a new, powerful sonar system it argues is harmful to marine life.

The coalition argues that the Navy's Surveillance Towed Array Sensor System Low Frequency Active Sonar (Surtass-LFA) threatens entire populations of marine animals.

The Navy's sonar uses powerful low-frequency sound to detect new diesel powered submarines as far away as 280 miles. This, environmentalists say, saturates vast areas of the ocean with disruptive sound that may harm and even lead to the death of mammals such as whales.

The Navy disputes this allegation and notes that its own research shows that few marine mammals, if any, would be subject to harmful noise. The US National Marine Fisheries Service, the government agency responsible for protecting ocean wildlife, has decided to allow the Navy to deploy the radar for five years. Source: *BBC* <<http://news.bbc.co.uk/2/hi/americas/2181263.stm>>

Zapping Unwanted Sound

Selwyn Wright, an engineer at the University of Huddersfield in Yorkshire, UK, has developed what he calls the Silence Machine. It works by analyzing the stream of sound waves from a noise source, and generating sound that is exactly out of phase that neutralizes the incoming sound waves. This process is already used in noise-canceling headphones. Wright's system is the first that can block out a particular source of noise to produce a personal "sound shadow" in which everything but the unwanted noise will still be audible.

The system uses microphones for sound sampling, a powerful computer for generating anti-noise, and loudspeakers for blasting that anti-sound at the incoming noise creating a shadow where the sound and anti-sound waves cancel each other out. Wright already has a Silence Machine that can be used in factories. Source: *Reed Business Information Ltd.*

Tooth Phone

British engineers James Auger and Jimmy Loizeau have developed a tooth implant that functions like a cell phone. It consists of a vibrator and radio wave receiver that are implanted by a dentist.

Sound, which comes into the tooth as a digital radio signal, is transferred to the inner ear by bone resonance, which means that information can be received anywhere and at any time—and nobody else can listen in. Source: *Reuters*, June 19, 2002

Rules to Protect National Park from Noise

A U.S. Circuit Court of Appeals for the District of Columbia told the Federal Aviation Administration to write new rules to reduce the noise of aircraft flying over the Grand Canyon in Arizona.

In 1987 the FAA implemented the National Park Overflights Act which Congress had passed to restore natural quiet in the Grand Canyon. The Park Service suggested that at

least half the park should be free of human sound for three-fourths of daylight hours. The FCC set a series of restrictions capping the number of flights at about 90,000 per year.

Environmentalists argued, and the courts agreed, that the FCC regulations did not meet the mandate of the Overflights Act. The court ordered the FAA to consider all planes that fly over the park, or else prove that they don't make audible noise on the ground.

Air tours are concerned that they will see a continued drop in revenue already hurt by events in New York on September 11, 2001. Source: *The Associated Press*

Composing with the Sounds of Space

The U.S. National Aeronautical and Space Administration commissioned a chamber music composition to make use of recorded sounds from space collected by Iowa astrophysicist Donald Gurnett. Gurnett has been a pioneer in recording the solar system's many sounds during numerous unmanned space flights since the early 1960's.

Composer Terry Riley is working with Gurnett to create an 85-minute multimedia piece called *Sun Rings* which the Kronos Quartet will play on its tour of North America. The premier is scheduled for October 26 in Iowa City. Source: *The Associated Press*

Middle Ear Implants

The U.S. Food and Drug Administration has approved a new generation of middle ear implants that may help millions with hearing impairments. The implants are designed to assist those individuals with sensory-neural hearing loss that results from inner ear or nerve damage.

The middle ear implants are attached to the middle ear bones to enhance their vibration. This amplifies nerve impulses to the brain, increasing hearing ability. All currently approved devices use a small external sound processor that is much like a microphone and worn behind the ear. This device, which is adjustable facilitates individual hearing and listening needs.

Middle ear implants made by Symphonix, Soundtec, Inc., Otologic, and Implantable System (St. Croix Medical, Inc.) range from \$5,000 to \$15,000 USD for device and needed surgery. Source: *CNN*

Baby Sounds Studied

Recent researchers at Dartmouth College note that babies ages 5 to 12 months use, while making babbling sounds, that part of the brain associated with language development.

Five infants from an English-speaking family and five from a French-speaking family were filmed as they made sounds. An analysis of the footage allowed researchers to closely examine mouth motion.

Babbling was an emphatic right side of the mouth motion. Smiling was a left side of the mouth behavior. A baby making non-babbling sounds does so with the mouth wide open. Researchers suggest that babbling is a precursor of spoken language and that babies begin to explore language development skills much earlier than believed. Source: *The Associated Press*

Resources

BOOKS

HereIngs: A Sonic Geohistory

72page Book and CD
Author: Steve Peters
Photographs by Margot Geist
La Alameda Press
Albuquerque, New Mexico, USA
\$20 USD

This book and CD offers an intimate immersion into the sound of a single, non-exotic place. Over the course of a year, Steve Peters visited The Land, an arts site in the foothills of the Manzano Mountains of New Mexico, and simply listened. In this semi-rural, high desert location, the soundscape is rather sparse, but none the less fascinating. The ambience includes birds and insects, as well as distant trains and occasional sounds of neighbors. Peters augments the slowly shifting ambiances with contact microphone recordings of leaves, grasses, fences, and ants, adding surprising and wonderful textures.

The CD is structured as a 24-hour sound portrait, with circa 3 minutes from each hour. The seasons are folded into this "linear" progression in a more random way, so that we may hear one hour in spring and the next in winter; again, a welcome and expansive twist of expectations.

The accompanying book includes three sections. In the first, Peters reflects on the practice of listening, and of seeking out "everyday" locations for appreciation, offering background into the history, ideas and process of creating the piece. Part Two consists of a set of poems inspired by each hour's experience, which were reproduced on listening benches installed throughout the site. Part Three is a detailed track list.

Source: Earth Ear: <http://www.earthear.com/catalog/hereings.html>

New Jersey CD and Field Guide to Reptiles and Amphibians

Conserve Wildlife Foundation
Address: Reptiles and Amphibians Field Guide/CD
PO Box 400, Trenton, NJ USA 08625-0400
CD \$10.00 US, Guide \$10.00 US, Both \$18.00 US.
Prices include shipping and handling

The New Jersey Division's Endangered and Nongame Species Program has produced and is offering a *Field Guide to Reptiles and Amphibians* and a related CD, *Calls of New Jersey Frogs and Toads*. Written by David M. Golden, an ENSP assistant biologist, and author Vicki Schwartz, the field guide contains 72 detailed descriptions of reptiles and amphibians that occur in New Jersey. With more than 100 full-color pictures and 72 distribution maps, this spiral-bound, 89-page guide will be useful for amateurs and experts alike.

Co-developed with John Bunnell of the Pinelands Commission, the CD has 40 tracks—both training tracks and tracks on which you can test your skill—of 16 different species.

COMPACT DISCS

Extraordinary Sounds from the Natural World

Pulse of the Planet
Producer: Jim Metzner (pulse@igc.org)
Available from: www.EarthEar.com
www.Amazon.com, www.Pulseplanet.com

The outstanding Pulse of the Planet has been republished as a CD with a 30-page booklet. A collection of truly amazing sounds that will take you on a journey—beginning with the rhythms of women drumming their hands on a river in Zaire, and ending with the hissing, 15 billion-year "echo" of the Big Bang that created the universe. The CD features 32 sounds, including:

- Humans in harmony with nature (water drumming in Africa, an initiation in Papua New Guinea, a rare wire recording of Shamanic chant from Siberia, and more)
- Animal life (oropendula birds, sacred deer, leafhoppers, gibbons, and others)
- Earthly phenomena (booming sands, a tornado, volcanic lava flow)
- Atmospheric and extraterrestrial phenomena (atmospheric whistlers, Jupiter chorus, pulsar, and more)
- Human/nature hybrid sounds (aeolian harp, a Japanese "deer chaser", and more)
- Recordings from Steven Feld, Doug Quin, Bernie Krause and others

A Morning in the Australian Bush

A Pure Nature Recording
by Andrew Skeoch & Sarah Koschak
LECD 9601
Listening Earth
P.O. Box 188, Castlemaine, Victoria 3450 Australia
E-mail: cooe@listeningearth.com.au
www.listeningearth.com.au

A sensitively and beautifully produced CD with clear information about the sounds heard, giving those who are interested the opportunity to identify the bird calls. "Each of our nature albums is inspired by our passion for exploring and sharing the wonders of wild Australia... As you listen to our recordings, we hope you will hear the diversity of our wildlife, the beauty of their songs and calls, and the 'stories' of nature: the passing of a rain shower or the beginning of a new day—and each time, hear something new."

More information about Listening Earth's other Australian nature CDs can be found on their website

NEW RELEASES

Ringtones Compact disc of proposed ring tones for mobile phones. Compiled and Released by Touch Music, London UK, 2002.

Your Favorite Sounds of London Compact disc edited by Peter Cusack. Published by London Musician's Collective, London UK, 2001.

QUOTES

The listener's imagination is an instrument of fiction: it constructs a reality inside the mind or reconstructs one which is in many respects different from the original.

Andrew Crisell

A silence fell with the waking bird, and a hush with the setting moon.

Alfred Lord Tennyson

The audio designer is a person who creates meaning, narratively or metaphorically, through sound imagery. This notion assumes a directorial acceptance of sound... recognizing the rich storytelling possibilities, as well as the manipulative power of sound in the theaters and in the privacy of one's mind.

Tony Zaza

Hörspiel [radio drama] is an acoustic genre divorced from the literary or musical, but utilizing dramatic elements only expressible in the aural milieu.

Mauricio Kagel, composer/practitioner

Today's TV 'couch potato' would not have survived in the era of radio since active mental participation was vital for a show to come alive. Every radio program was 'visually' unique"

Traci Becker

Songs live in the air and they appear at all times. If you're a songwriter you like music, but what you really want is for music to like you. You want to be an aerial, or an antenna, for songs to locate you, and they do.

Tom Waits

The land speaks rivulets of light
Listen to my breath
Rest a while and listen

Anonymous evocation of how the
Aboriginal people of Australia relate
to the land

The butterfly
rests upon the temple bell
asleep.

Buson, 18th century Haiku Master

Announcements

Soundscape Polaroids in Montevideo

October 28—November 2, 2002

Registration is free.

Information: ps@eumus.edu.uy

Phone: (598-2) 901-6946,

University School of Music

Paysandú 843, 11100 Montevideo, Uruguay.

The University of Montevideo's School of Music and the Goethe Institute of Montevideo have invited Hans-Ulrich Werner to continue the exchange work started during his first visit in 2001. Soundwalks, theoretical discussions on soundscape issues, listening-meetings and a public presentation of the results of this year's developments in the project will take place during the week.

Save Our Sounds: America's Recorded Sound Heritage Project

Television Broadcast—United States

History Channel

December 11, 2002

The History Channel's documentary, *Save Our Sounds*, charts the history of audio technology, from Edison's wax cylinders to twenty-first century digitization. It explores the depth and beauty of a national collection of historic speeches, roots music, and oral traditions. The program will include interviews with preservationists, sound engineers, and artists including Pete Seeger, B.B. King, and Ry Cooder. The production is a joint endeavor of the Smithsonian's Center for Folklife and Cultural Heritage and the American Folklife Center at the Library of Congress. For more information see: www.saveoursounds.org

3rd WSEAS International Conference

December 19—21, 2002

Acoustics, music, speech and language processing (ICAMSL 2002).

Formerly called Acoustics and Music: Theory and Applications.

Puerto De La Cruz, Tenerife, Canary Islands, Spain

For more information: www.wseas.org/conferences/2002/tenerife/icamsl

Pulse Field

January 13—February 28, 2003

Sound-Art Gallery Installation, Exhibition and Archive

Call for works: Deadline for submission:

October 15, 2002

Composers and sound artists are invited to submit original works for inclusion in the Pulse Field project at Georgia State University in Atlanta, Georgia. This Sound-Art/Electroacoustic Music exhibition and archive will be curated by Douglas Kahn and will feature significant explorations in sound from all over the world, irrespective of aesthetic direction, technical means or cultural context. Selected works will be featured in the exhibition and in a published CD-ROM catalog created to document the project and

will also become permanent items in the Pulse Field archive.

Appropriate genres may include, but are not limited to: environmental sound, acoustic ecology sound, acousmatic music, electroacoustic music, computer music, electronic music, ambient music, experimental music, experimental sound collage, articulated found sound, video sound and images, sound and sculpture, and sound for installation.

Contact for submissions and information regarding submissions:

Pulse Field

R. S. Thompson, Associate Professor

Center for Audio Recording Arts—CARA

School of Music, Georgia State University

P.O. Box 4079, Atlanta, GA 30303-4097 U.S.A.

Tel: 404-651-1731

Fax: 404-651-1583

E-mail: musrst@langate.gsu.edu

The 5th School of Sound 2003

South Bank Centre's Purcell Room

London, England

April 23—26, 2003

Since its inception in 1998, the *School of Sound* has raised the profile of sound in audio-visual media through its unique programme that integrates practice with theory, and art with entertainment. At the heart of the *School of Sound* programme is variety. From Walter Murch's wide-screen, multi-layered sound designs to Peter Kubelka's deceptively primitive collages to Laura Mulvey and Michel Chion's provocative analyses and Carter Burwell's emotive, modern compositions, the presentations have provided the broadest possible perspective on screen sound. The *School of Sound* will not teach you equipment or software, but we will lead you along new paths through the creative use of sound in media and art. Full programme details will be available in autumn 2002. For information or to join the mailing list: email sos@schoolofsound.co.uk or visit www.schoolofsound.co.uk.

Natural Soundscapes—Understanding and Managing for the Future

The First International Symposium on Natural Soundscape Management (ISNS1) will occur within the next year. The purpose of this unique symposium is to understand the challenges of describing, preserving, and managing park and wilderness soundscapes. ISNS1, for the first time, will bring together the range of park, acoustical, recreational and other involved experts necessary to discuss the value, definition, design and management of soundscapes in parks and public lands. Park managers and policy makers, acousticians, recreational sociologists, acoustic ecologists, sound recordists and other interested professionals are invited to present papers and participate in this special symposium.

Harris Miller Miller & Hanson will be hosting this event (at a location to be determined)

and is seeking your suggestions about topics you'd like to see addressed at this unique forum. To receive more information about the Symposium or to offer suggestions, please fill out the Request for Information Form which can be found at: <http://www.hmmh.com/soundscape.html>

Rencontres Architecture Musique Ecologie

Evolène, Sion and Valais, Switzerland.

Conference and workshops, organized by Collectif Environnement Sonore, that explore the way we react to our acoustic environment. Pierre Marietan, composer, is one of the organizers. We asked him for a statement. He wrote: "I imagine living in a world of exchange between sounds and silences, where we can respond to the voice of the other, incline an understanding ear to the slightest sound, create a polyphonic universe in the continuity of silence. Such is the environment in which everyone should be able to live. I propose to find an equilibrium of complementarities in a new enterprise: www.arts-electric.com/index.html

Sounds from the Natural World

is CDeMUSIC's current feature

<http://www.cdemusic.org/>

Have the by products of the industrial age irreparably damaged our natural environment? The question has led us to renew our interest in nature and to find beauty in natural things. The sounds of forests, the flow of water, the songs of birds ... These are the sounds of the natural world. Be quiet and listen ...

Listen to Steven Feld's *Rainforest Soundwalks*, Annea Lockwood's *A Sound Map of the Hudson River*, Rik Rue's *Ocean Flows*, and David Lumsdaine's *Lake Emu* and *Cambewarra Mountain*. Listen also to creativity based on nature, as in John Luther Adams' *Earth and Great Weather*, Malcolm Goldstein's *The Seasons: Vermont*, and Douglas Quin's *Forests: A Book of Hours* ...

Sound Database

Sound Research Group

Staffordshire University, U.K.

Staffordshire University is setting up a database to enable the constituency that emerged from the *Sounding Out international Symposium* last July, to make links across practices, disciplines and institutions. A second aim is to identify what colleagues in different sectors of this constituency feel most urgently needs doing in terms of research, media and arts policy initiatives, educational interventions, audience building, etc.

If you are interested in participating further or joining the broad based community of workers and researchers in Sound, please take a few moments to fill in a very brief questionnaire at this address: <http://www.soundfile.org/db>. This will then be collated into a Sound Database that will be made available on the web at www.soundfile.org

Soundwalking the Internet

Compiled by Gary Ferrington

In recent years a handful of individuals have taken advantage of the Internet to share with others a regional soundscape. These web sites, although no substitute for a first hand soundwalk, provide the user with a visual and aural glimpse into a distant part of the world.

Here is a sampling of sites that are currently accessible on the Internet. I have chosen those which have both sounds and images. Several have maps that outline a particular walk such as *A Soundwalk through Toronto* by Richard Windeyer.

Listening To Nature: A Sound Walk across California

www.museumca.org/naturalsounds/

This is one of the most beautifully designed sound experiences related to place on the Internet. It was created by the Oakland Museum of California and takes advantage of that facility's large archive of natural sound.

The site is organized so as to explore the natural communities of California from the Pacific Ocean, the inland valley and over the Sierra Nevada to the Great Basin. One is introduced to a variety of animal and bird species living in each of the regions explored. Beautiful illustrations provide a visual reference for the many sound files that can be quickly download.

Queen Elizabeth Park

www.finearts.yorku.ca/andra/soundwalk/qep.html

This web site, developed by Andra McCartney, documents a soundwalk done in August 1997 with Hildegard Westerkamp through the landmark Queen Elizabeth Park in Vancouver, British Columbia. The site is designed to provide a virtual aural experience and includes a map for identifying park locations where sound files have been recorded. Queen Elizabeth Park is a reflective centrepiece in Vancouver and provides, in addition to hilly parkland, a domed tropical garden with exotic plants and birds.

A Soundwalk Through Toronto

www.inforamp.net/~windeyer/TOSoundwalkMAP.html

This soundwalk was conducted by the Canadian Association for Sound Ecology (CASE), as part of the activities for International Noise Awareness Day, April 30th, 1997. This particular virtual representation of that event was designed by Richard Windeyer. It includes a nicely designed numerical map of downtown Toronto. Click on a number and hear a sound recording of that particular site.

Fridges and Streets

www.fridges.yucom.be/main.htm

This presents an unusual approach to a soundwalk and is perhaps one that could only be best done in a virtual environment such as the web. Here we find a web site dedicated to the humming sound of refrigerators developed by Ward Weis of Belgium.

The originator suggests that a refrigerator is timeless, always humming today as it did yesterday until it burns out. Unlike other sounds heard from the street that are often transient such as a car horn, someone playing music, a passing pedestrian, or a song bird, the sound of the fridge is constant.

The designer of this site, who received an honorable mention in the Art on the Net 2001 competition *Post-Cagian Interactive Sounds* of the Machida City Museum of Graphic Arts, has made available the fridge sounds of several cities including, Berlin, Brussels, and Ghent.

Typically a city map is divided into 16 equal squares. In each of them he has made a 1-minute recording of the sound of a refrigerator. Also a 1-minute sound-picture is made in front of the house where the refrigerator was recorded. By clicking a square on a map you can hear the sound of the refrigerator or the street associated with the location of the fridge.

Weis encourages participation by others and provides instructions on the web site suggesting ways in which to include refrigerator sounds in the participant's region of the world in this project.

Vancouver Sound and Photo Gallery

www.vanmag.com/sounds/vansound.html

This is a very simple but enjoyable site to explore, developed by Vancouver Magazine, an online information publication about events and activities in British Columbia's largest city.

Although this is not designed as a virtual soundwalk it does provide the opportunity to visit ten sites that one can "see" and "hear". These include: Stanley Park 9 o'clock Gun, Sky Train, Gastown Steam Clock, Horseshoe Bay Ferries, Harbour Sea Planes, Molson Indy 1995, Granville Island Market, harbour horn playing "Oh Canada", and the famous Sea Bus. All of these are classic soundmarks in Vancouver. Some of the sound files used on this web site are from the archive of the former World Soundscape Project at Simon Fraser University.

Promenade sonore/Soundwalk

cec.concordia.ca/econtact/Soundwalk/index.htm

Published online by eContact!

This site contains a number of interesting explorations of the acoustic soundscape. Although only a few contain what we might consider virtual soundwalks via the web, the content of the site is worth visiting.

Several sound artists are represented. In most instances sound files are included. Andra McCartney's listing provides several virtual soundwalk examples such as the previously listed Queen Elizabeth Park. Individuals represented by this site include:

Steven Feld on Rainforest Soundwalks—Interviewed by Carlos Palombini
Rainforest Soundwalks by Steven Feld—Reviewed by Carlos Palombini

Victoria Fenner—No Time for Silence

Andra McCartney—Soundwalk

Sarah Peebles—108:Walking through Tokyo at the turn of the century

Will Plowman—India Soundscape Project

Hildegard Westerkamp—Soundwalking (article)

Toronto Island Soundwalk

www.interlog.com/~cansound/

Canadian Association of Sound Ecology

Toronto composers Darren Copeland and Richard Windeyer created this soundwalk which takes place on the off shore islands of downtown Toronto. The web page includes a walking trail map with graphic symbols that represent the various acoustic events that can be heard at given locations. Real Audio sound files can be downloaded through which one experiences some of the sound sites listed on the map.

Additional Websites of Interest:

Toby Morgan, Dawlish Warren Soundwalk, Devonshire, (England)
www.coldstare.50megs.com/pagefive.html

Quiet American (US/Vietnam)
www.quietamerican.org/field_vietnam.html

Victoria Fenner, Ottawa Soundwalks (Canada)
www.community-media.com/spirit/VFsoundworks.html

Full Moon over Killaloe 2000, Audio Art Camp, Soundwalk (Canada)
<http://132.205.57.9/facstaff/m-o/mccartney/soundwalk/fmoksw.html>

Gabriëlle Marks, overSPOKEN & underHEARD
25 days of eavesdropping, observing New York through the ear (US)
www.9nerds.com/shopwindow/overspoken_underheard/

Gary Ferrington is a senior Instructor Emeritus in the University of Oregon's College of Education. He is currently the secretary and web master of the World Forum for Acoustic Ecology.

World Forum for Acoustic Ecology

Membership Information

JOIN OR RENEW NOW! PLEASE CHOOSE THE APPROPRIATE AFFILIATE BELOW.

As a member of an affiliate organization you will automatically become a member of the WFAE. If you are not near a convenient affiliate organization, or if you relocate frequently, you can join the WFAE directly as an affiliated individual. Financial members of the WFAE receive a subscription to *Soundscape-The Journal of Acoustic Ecology*. A Membership Form and a sample article from *Soundscape* are available for download in PDF format on the WFAE website: <http://www.wfae.net>

DONATIONS ARE WELCOME

Additional donations (in CDN \$ and US \$, to the below WFAE address) will be gratefully accepted. Donations will be used toward the production costs for *Soundscape*, and to help subsidize those who cannot afford membership, or who come from countries with disadvantageous exchange rates.

Australian Forum for Acoustic Ecology (AFAE)

Individual fee: A\$40 — Institutional fee: A\$95
Please send a cheque or money order in Australian Funds to:
Australian Forum for Acoustic Ecology (AFAE)
P.O. Box 268, Fairfield, Victoria
3078, Australia

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

Individual: Cdn \$35 — Student/Étudiant: Cdn \$20 (with a copy of your current student ID). Please send a cheque or money order in Canadian funds to:

Canadian Association for Sound Ecology (CASE)
Association Canadienne pour l'Écologie Sonore (ACÉS)
c/o Musicworks
401 Richmond Street West, Suite 361, Toronto, ON
M5V 3A8, Canada

UK and Ireland Soundscape Community (UKISC)

Individual fee: £20 GBP — Institution: £50 GBP
Concessions: £10 GBP
Cheques should be made payable to the UK and Ireland Soundscape Community and sent to:

John Leveck Drever
Flat 1, 17 Queens Crescent, Exeter, Devon
EX4 6AY, UK
E-mail: johndrever@MOOSE.CO.UK
<http://www.dartington.ac.uk/>

Suomen Akustisen Ekologian Seura (Finnish Society for Acoustic Ecology—FSAE)

Individual fee: 120 FIM — Student fee: 80 FIM. Please pay to the bank account in Finnish Funds: Osuuspankki 571113-218325

Suomen Akustisen Ekologian Seura
c/o FT Helmi Järviluoma
Musiikkitiiede, Turun yliopisto
20014 Turku, Finland

Forum Klanglandschaft (FKL)

Austria, Germany, Italy, Switzerland

FEES:	Normal	Studierende	Gönner	Institutionen
EURO	20	13	40	50
CHF	35	25	70	85

Austria: CA Creditanstalt, 6218 2061 531, BLZ 11000, lautend auf "FKL"

Germany: Mittelbrandenburgische Sparkasse Potsdam, 350 300 4032, BLZ 160 500 00

Italy: Conto corrente postale nr. 100 075 08 Firenze, intestato a Albert Mayr, con l'indicazione della causale "iscrizione FKL/WFAE"

Switzerland: Postcheckkonto 40-551632-1

Japanese Association for Sound Ecology (JASE)

Individual fee 2,000 yen/year

NOTE: the JASE fee should be paid with and in addition to the annual fee of 6,000 yen for the Soundscape Association of Japan (SAJ) by postal transfer.

Postal transfer number: 00110-6-612064

Japanese Association for Sound Ecology (JASE)
c/o Keiko Torigoe
University of the Sacred Heart
4-3-1, Hiro-o, Shibuya-ku, Tokyo, 150-8938, Japan

WFAE Affiliated Individual Membership

Regular: US \$35 - Students: US \$20
(with a copy of your current student ID).

WFAE Associate Membership

Regular: US \$75 - or as negotiated depending on size of organisation. Please send US cheques, international money orders, or travellers cheques made out to the WFAE. Do not send drafts, as bank charges are very high! Mail to:

World Forum for Acoustic Ecology (WFAE)
Membership Secretary
P.O. Box 268, Fairfield, Victoria
3078, Australia

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(Each subscription includes 2 copies per year including postage)

1 year library or institution paper copy subscription = US \$50

1 year individual paper copy subscription = US \$25 • Single copy purchase: US \$15.00

Available from the WFAE address above.



"The listener's imagination is an instrument of fiction: it constructs a reality inside the mind or reconstructs one which is in many respects different from the original."

— Andrew Crisell