

The background of the cover is a vertical strip of aerial satellite imagery. The top half shows a dark blue ocean with white clouds. The bottom half shows a coastal area with a color gradient from dark blue to red, representing different land and water features. The text is overlaid on this background.

Soundscape

VOLUME 17 | 2019

CELEBRATING 20 YEARS OF
THE AUSTRALIAN FORUM FOR ACOUSTIC ECOLOGY

The Journal of Acoustic Ecology

Soundscape

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VOLUME 17 | 2019

ISSN 1607-3304

Soundscape: The Journal of Acoustic Ecology is an English language publication of the World Forum for Acoustic Ecology (WFAE). The publication is conceived as a forum for communication and discussion about interdisciplinary research and practice in the field of Acoustic Ecology, focusing on the interrelationships between sound, nature, and society. *Soundscape* seeks to balance its content among scholarly writings, research, and an active engagement in current soundscape issues, both in and beyond academia while serving as a voice for the WFAE's diverse and global community.

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Original Design and Soundscape Logotype

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Design and Publication

The design and publication of this edition of the journal were made possible through membership contributions and donations.

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

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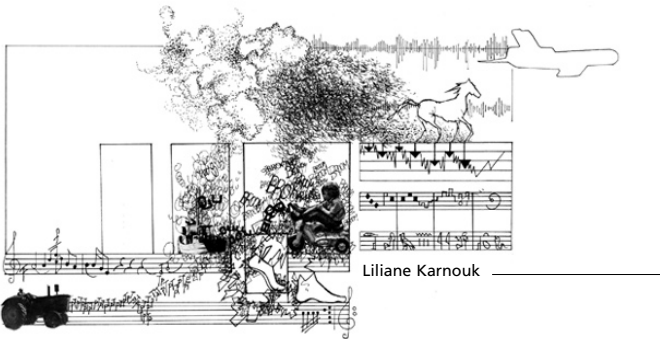
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Editorial

It gives me great pleasure to introduce the latest edition of *Soundscape*, and profile the incredible diversity of acoustic ecology practice and research currently happening in Australia. Over the last 20 years, acoustic ecology has evolved across the country as a highly interdisciplinary, dynamic field with increased engagement across environmental sciences, architecture, health, digital technology, creative arts and humanities. The last decade has seen a strong emergence of socially engaged practice and sonic activism along with a rapid increase in academic research with large-scale projects supported by highly competitive national funding opportunities. These have recently included a prestigious national fellowship for Jordan Lacey’s research on urban soundscape design to assist in the management of the built environment and *The Acoustic Observatory*—a continental-scale acoustic sensor network, recording for a five-year period with 400 continuously operating acoustic recorders collecting approximately 2000 terabytes of sound data across multiple Australian ecosystems. Recent years has also seen increased engagement with communities and schools across the country exploring acoustic ecology from both scientific and artistic perspectives.

This edition of *Soundscape* commemorates the 20th Anniversary of the Australian Forum for Acoustic Ecology (AFAE)—a milestone that was celebrated in 2018 through events, research and collaborations. This celebration was bittersweet for the AFAE, as we also mourned the loss of Nigel Frayne, the founder of the AFAE who sadly passed away in January 2018. Nigel’s life and work has been celebrated at various acoustic ecology events throughout the AFAE anniversary, including a tribute at the Global Composition Conference in Germany where his leadership and commitment to the World Forum for Acoustic Ecology (WFAE) and AFAE was acknowledged. Nigel joined the WFAE in 1996, a few years after it was founded, when he met Hildegard Westerkamp, who has kindly written a tribute to Nigel for this edition of *Soundscape*. WFAE President

Eric Leonardson also reflects on Nigel’s legacy in his report and I wanted to take a few words to highlight his incredible impact on the field of acoustic ecology in Australia. As a founding member of the AFAE, he spearheaded many activities over the years, including the 2003 WFAE conference in Melbourne; a pivotal event for many people, nationally and internationally. As the first and longest-standing chair of the WFAE, his commitment, passion, persistence and dedication transformed the organisation into a truly global network. As the current president of the AFAE and a committee member for many years prior, I certainly would not have been able to step into the roles I have with the AFAE and WFAE without the consistent advice, guidance and support from Nigel. His passing was a huge loss for the international acoustic ecology community and has certainly had a significant impact on the AFAE and the WFAE. In Australia, we continue to explore appropriate ways to acknowledge his work and dedication to acoustic ecology and this edition of *Soundscape* is dedicated to his legacy.

While this edition celebrates the 20th Anniversary of the AFAE—it is vital to acknowledge that Indigenous communities have practiced deep listening and acoustic ecology in various forms across the country for well over 60,000 years. In Australia, it is common practice to open public events with an Acknowledgement of Country—paying respect to elders past, present and emerging and acknowledging the traditional custodians of the land. For these reasons, I felt it was important the first voices in this edition of *Soundscape* were Indigenous. It is a privilege to have Gunggari scholars Vicki Saunders and Gayle Munn open *Soundscape* with a listening invocation—a meditative prelude to reading the journal and an opportunity to listen and acknowledge the Country where you are reading.

Our three feature articles showcase established Australian practitioners who are all pioneers of their field, pushing the boundaries of sound and interrogating our sonic relationships with place.

Ros Bandt writes about ‘The Acoustic Sanctuary’—a remote property in Fryerstown, Victoria that has evolved over two decades as a dedicated place for listening, a place to contemplate our sonic habitat and a sound laboratory for her innovative and interdisciplinary creative practice. Bandt calls for a deeper understanding and respect for our sonic heritage and further engagement with sound culture. Acclaimed percussionist, composer and sound artist Vanessa Tomlinson asks why place is so critical in music making and proposes that compositions that intentionally interact with the environment change the way we listen and leave markers of cultural, social and environmental conditions at particular junctures in time. Her article examines various approaches sound artists engage with the environment and suggests that this work is well placed to reawaken our custodianship of the land and assist us in shaping our future.

The final feature article showcases the work of sound artist Nigel Helyer through four case studies on his projects at Bundanon, a three thousand acre property in the Shoalhaven river valley in rural NSW, Australia. The artworks were created as part of a three-year Australian Research Council (ARC) Linkage Grant project: When Science Meets Art: an environmental portrait of the Shoalhaven River Valley. The projects bring together environmental science, new technologies and cultural history to communicate the diverse environments of Bundanon.

In addition to the feature articles, we are pleased to present several research profiles including Jesse Budel—an emerging voice in acoustic ecology who has recently completed his PhD that involved developing a creative framework that connects and adapts the principles and methods of soundscape ecology to ecological sound art practice. We also feature a field report from sound artist and performer Vicki Hallett who visited South Africa on a field recording expedition and had an opportunity to perform an intimate concert at Maboel Rock surrounded by curious wildlife.

The final article presents preliminary outcomes from the pilot research project “Listening to Country: Exploring the value of acoustic ecology with Aboriginal and Torres Strait Islander women in prison”. In early 2019, an interdisciplinary team of researchers worked with women in Brisbane Women’s Correctional Centre (BWCC) to produce an immersive audio work based on field recordings of natural environments (of country) for the purpose of stress relief, relaxation, cultural connection and well being. The pilot research has attracted various partners to expand the project and it is anticipated that the ‘Listening to Country’ model might be transferable into a number of different wellbeing contexts, including with at-risk youth, Elders/seniors in care or off-country and women transitioning from prison and mental health facilities. These opportunities are all exploring the interdisciplinary possibilities of acoustic ecology in contributing to health and wellbeing and build on the foundations of the discipline from the 1970s.

I also wanted to take this opportunity to reflect on the AFAE and some of the activities that occurred throughout our 20th Anniversary in 2018. Losing Nigel Frayne at the start of the year was certainly a challenge and shifted the focus of some of our activities. We were glad Nigel was able to contribute ideas towards the planning for the AFAE 20th Anniversary in 2017—when we decided to focus our energies around two large events—the 2018 *International Ecoacoustics Congress* and an acoustic ecology event at Ros Bandt’s Acoustic Sanctuary in November 2018. I am pleased to report both of these events went ahead with great success and I wanted to offer a

reflection on both of these initiatives.

The AFAE played a large role in the development and hosting of the 2018 International Ecoacoustics Congress held in Brisbane at Griffith University and QUT in June 2018. The aim of the 2018 congress was to bring together artists, scientists, natural resource managers and industry to explore the ways that sound can deepen our understanding of the environment. The full conference program and proceedings is available online: www.ecoacousticscongress.org

The conference team were very happy to receive WFAE support and endorsement to host the congress, which included international promotion through the WFAE affiliate networks. The feedback from the congress was excellent and the delegates were very inspired by the strong creative stream that showcased acoustic ecology in Australia. The WFAE and AFAE were well represented through presentations, installations and performances. It was fantastic to have a strong WFAE presence at the event, as previous ISE gatherings (International Society for Ecoacoustics) have had limited association with the WFAE or international acoustic ecology community.

The concert featuring keynotes David Monacchi and Ros Bandt (both sponsored by the AFAE) was at capacity and most delegates were able to experience the creative keynotes, research presentations and installations throughout the congress. Ros Bandt (a founding WFAE member) made the history of acoustic ecology and the WFAE/AFAE very clear—which was extremely enlightening for many of the emerging scientists in the room.

There were 135 full delegates registered and over 300 participants including students, artists and invited delegates. It is worth noting that this included roughly 41% women. We thought this was something to be celebrated for an emerging subset of acoustic ecology that crosses sciences and humanities, particularly when music technology, engineering and some biological sciences are notoriously male dominated. The diversity was also reflected across the career stage spectrum with a balance of students, early career researchers and high profile academics that have been pioneering the field from a scientific and artistic perspective.

The interdisciplinary programming was certainly dominated by the sciences, but this was to be expected as this was the first year a creative stream was included in the International Ecoacoustics Congress. The creative stream had extremely positive feedback and we hope to include similar programming at future events, including the 2020 International Ecoacoustics Congress in Italy.

Organising a large international conference across two universities certainly came with its challenges, but we think this set a good example for the acoustic ecology and ecoacoustics community and demonstrated that collaboration (across institutions, disciplines and industries) is one of the most effective ways to expand and advance the field, particularly when we are all working towards a common goal of promoting a greater awareness of the role of sound in understanding our environment.

In addition to the congress, the AFAE supported and managed the Ecoacoustics Field Trips which involved delegates travelling to Noosa Biosphere Reserve, Mary Cairncross Reserve and the Rainforest Discovery Centre on the Sunshine Coast for sound walks, field recording expeditions and acoustic ecology presentations. The field trips were booked to capacity and provided an excellent opportunity for international delegates to engage with the natural soundscapes and ecosystems of Queensland.

I also wanted to acknowledge the loss of Stuart Gage in 2019—one of the pioneers of ecoacoustics and a founding member of

the International Society for Ecoacoustics. Stuart was a generous collaborator and visionary researcher who truly understood the value of sound in our environment. His recent book 'Ecoacoustics: The Ecological Role of Sounds' was a ground breaking collection of articles demonstrating interdisciplinary methods for using sound to understand climate change and monitor ecosystems across the planet. He was an advocate for interdisciplinary research and a highly supportive mentor and collaborator for many across the world. His digital acoustic library houses more than 2 million recordings from over 20 soundscape projects.

The AFAE 20th Anniversary celebration and program was officially launched as part of the Shifting States Anthropology conference at the University of Adelaide. Over 500 anthropologists from across Australia, New Zealand and the UK came together in Adelaide for the annual conference of three national and international anthropology associations (AAS, ASA and ASAAZ). Our AFAE sponsored session "Dialogues in sound and listening: acoustemology and acoustic ecology" featured Anthropologist, filmmaker, sound artist/performer Steven Feld with a keynote and also involved panels and performances throughout the day. The day concluded with Steven Feld and I in conversation with Daniel Fisher (Anthropology, UC Berkeley) and Lisa Stefanoff (Chair) exploring sound, acoustic ecology, listening and sonic arts in critical anthropology and beyond. This event included an announcement of an event we planned to host in collaboration with Ros Bandt at the Acoustic Sanctuary in 2018.

The proposed event became *Freshwater Listening*, a national two day (free) event on November 17–18 in regional Victoria celebrating freshwater care and 20 years of acoustic ecology in Australia. The event was hosted by Ros Bandt and the AFAE with support from various other community organisations. The program included sound walks, hydrophone workshops, freshwater listening expeditions, presentations, performances and the Freshwater Listening

exhibition featuring local artists from regional Victoria. AFAE members were very active in the development and delivery of the event, with AFAE board members Andrew Skeoch and Vicki Hallett involved in workshops, presentations and performances throughout the two days. I was happy to give presentations on acoustic ecology and listening underwater and also opened the exhibition with a brief presentation on 20 years of acoustic ecology in Australia. During this event, we acknowledged the generosity and commitment of Ros Bandt in being a pioneer of acoustic ecology nationally and internationally and her dedication to hosting events and promoting the field of acoustic ecology to the local community.

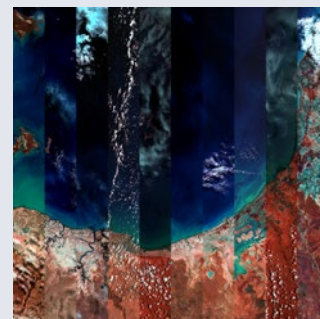
The AFAE 20th Anniversary also featured many smaller events and celebrations across the country and awards and accolades for our members across Australia, including state and federal funding for acoustic ecology research and major awards for creative acoustic ecology projects. We congratulate the team behind the Piano Mill for their recent win in the cultural category at the World Architecture Awards. The Piano Mill also received the 2017 *Award for Excellence in Experimental Music* for "an innovative realisation that highlights the interdisciplinary possibilities of experimental music in combining architecture, acoustic ecology and instrument-making in an immersive experience of musical accidents, performances and installations responding to place". It is great to see projects with an acoustic ecology focus receive such high profile national and international recognition.

AFAE members across Australia continue to conceive and develop new projects and we are home to a range of long standing initiatives such as Tristan Louth-Robins' Fleurieu Sound Map (active since 2011) and Anthony Magen's incredible sound walks, including annual expeditions through the kaleidoscopic soundscapes of the city with Melbourne International Jazz Festival that have been running for over eight years. We represent members across

Cover Image: "12 Months Over the Gulf of Carpentaria," by Grayson Cooke

For the past 40 years, NASA Landsat satellites have orbited the Earth. Performing what is known as "remote sensing", they use sensors that record both visible and infrared light, to produce data used by geoscientists and the private sector to track environmental change over time. "12 Months

Over the Gulf of Carpentaria" is precisely that: a time-lapse mosaic of satellite images over the Gulf of Carpentaria in Australia, showing the changing atmospheric conditions over a period of a year. Produced through a partnership with Geoscience Australia and the "Digital Earth Australia" platform, this image is part of an ongoing exploration of how creative uses of satellite data can both reinforce the environmental monitoring function of the Landsat program and introduce new conceptual and artistic dimensions. This project seeks to release satellite imaging from a directly instrumental purpose, fostering a way of knowing that acknowledges our connectivity to and feeling for the Earth.



Born in New Zealand and based in Australia, Grayson Cooke is an interdisciplinary scholar and media artist, Associate Professor of Media in the School of Arts and Social Sciences at Southern Cross University. Grayson has presented media art and live audio-visual performance works in Australia and internationally, and he has exhibited and performed in major international festivals such as the Japan Media Arts Festival, the WRO Media Art Biennale, the Imagine Science Film Festival in New York, VIDEOFORMES in France and the Currents New Media festival in Santa Fe. As a scholar he has published widely in academic journals, and he is also an associate editor for the scholarly journal "Transformations." He holds an interdisciplinary PhD from Concordia University in Montreal.

Personal website: www.graysoncooke.com | Project webpage: www.graysoncooke.com/works/12months

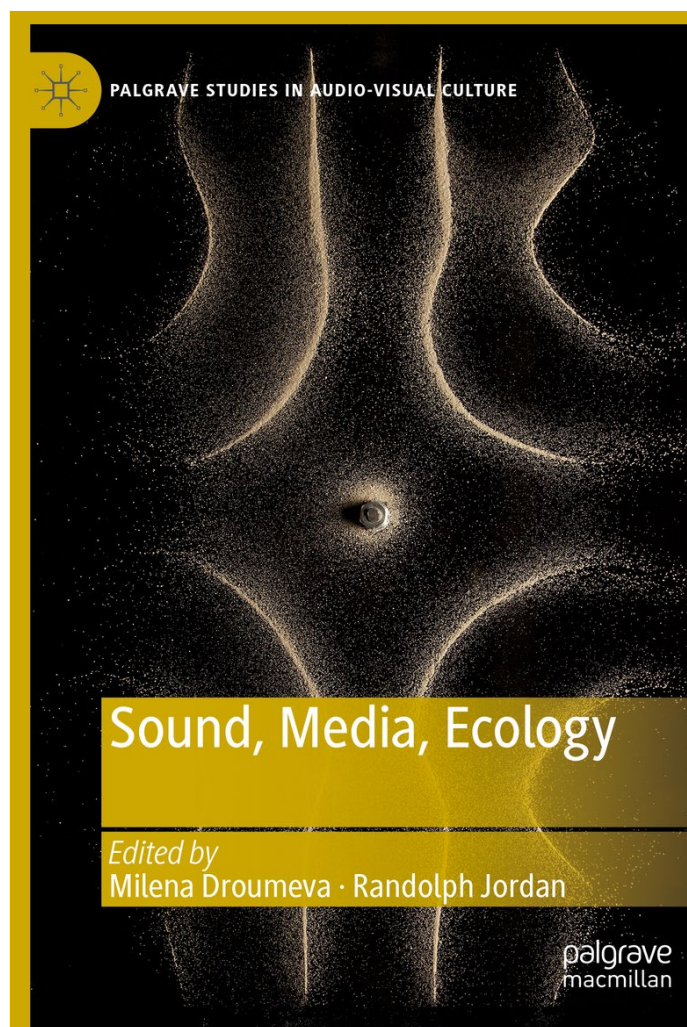
Australia who have a professional or personal interest in fields such as: acoustics, audiology, architecture, bioacoustics, conservation biology, digital design, education, ecoacoustics, ecosystem health, landscape, phenomenology, sound art, sound culture and sound design. The AFAE brings together people who aim to promote a culture of listening to raise awareness of issues around our sonic environment; and to encourage discussion, debate, education, practical activities and research. We exist to support and promote the work of our members and strengthen and enhance the value of acoustic ecology in Australia. This includes increased engagement with climate activism and fields such as environmental sciences, urban design and architecture. The AFAE also respects and acknowledges Indigenous knowledge systems and communities who have listened and lived sustainability with the environment for over 60,000 years. We hope organisations such as the AFAE can provide a platform to amplify Indigenous voices as climate breakdown and ecological crisis continues to cause incomprehensible consequences that require urgent interdisciplinary action.

It has been a privilege to bring together this edition of *Soundscape* and serve in the position of president for the AFAE. I am particularly inspired that we are able to present this digital version of *Soundscape* with embedded sounds and videos that allow our readers to listen and dig deeper into the work and ideas presented in each article. If you happen to be reading the print version of the journal, I would encourage you to visit wfae.net and download the digital version to access the rich media content. The next three editions of *Soundscape* are in progress with guest editors working on ideas and new content.

The next edition is themed around the Sound + Environment Conference hosted at the University of Hull, UK with guest editor Dr. Rob Mackay and is published alongside this edition in 2019. The digital transition of *Soundscape* is still in progress but it has provided a wonderful opportunity to re-evaluate the purpose of the journal and create a vision for the future that supports and promotes our global acoustic ecology community and WFAE affiliates. This vision includes a stronger focus on virtual tools and embracing the possibilities of digital media to disseminate the journal and reduce our carbon impact by avoiding printing. We are currently working on a new journal database and mechanisms to publish articles in an audio format, which we feel strongly resonates with the purpose of *Soundscape*. As with all WFAE activities, this is an open and collaborative process that is being driven by a dedicated team of volunteers. Please do not hesitate to get in contact if you have ideas or would like to be involved and support the digital transition of *Soundscape*. I hope you enjoy exploring this edition of the journal and please visit our website and social media platforms for further content from all our featured articles.

I also wanted to thank the WFAE executive, especially WFAE President Eric Leonardson, who is a constant source of support and also our AFAE board, a wonderful interdisciplinary team of busy artists and researchers who are always a pleasure to work with.

– **Dr. Leah Barclay**, Editor-in-Chief (September 2019)



'Sound, Media, Ecology'

Palgrave Macmillan

Edited by Milena Droumeva and Randolph Jordan

This volume reads the global urban environment through mediated sonic practices to put a contemporary spin on acoustic ecology's investigations at the intersection of space, cultures, technology, and the senses.

Acoustic ecology is an interdisciplinary framework from the 1970s for documenting, analyzing, and transforming sonic environments: an early model of the cross-boundary thinking and multi-modal practices now common across the digital humanities. With the recent emergence of sound studies and the expansion of "ecological" thinking, there is an increased urgency to re-discover and contemporize the acoustic ecology tradition.

This book serves as a comprehensive investigation into the ways in which current scholars working with sound are re-inventing acoustic ecology across diverse fields, drawing on acoustic ecology's focus on sensory experience, place, and applied research, as well as attendance to mediated practices in sounded space. From sounding out the Anthropocene, to rethinking our auditory media landscapes, to exploring citizenship and community, this volume brings the original acoustic ecology problem set into the contemporary landscape of sound studies.

Edited by Milena Droumeva and Randolph Jordan with authors including Barry Truax, Hildegard Westerkamp, Karin Bijsterveld, Jonathan Sterne, Linda O'Keeffe, Leah Barclay and Andra McCartney. <https://www.palgrave.com/gp/book/9783030165680>

Listening Invocation

By Vicki Saunders and Gayle Munn

*Uwalla Ukamindiya. Yuunji dandhigu nagaya yindagu.
Niya nulla noogalla niya yimbaya yadina undunoo yant el our ou.*

We begin this edition of *Soundscape* with as yet untranslated Gunggari words written on Gunggari country in Australia, to acknowledge the absence of the sounds of the languages that used to sing this country into being. They are also used to acknowledge the presence of the land and the countries in which we meet—here as you read and we write. We use these words to acknowledge the traditional custodians of these places and all of our ancestors – past, present and emerging. We would also like to acknowledge the journal editors; it is an honor to be invited to open this edition. And finally we use these words to acknowledge *You* who are listening here today, reading these words.

This edition of *Soundscape* is about listening in Australia. Dr. Miriam-Rose Ungunmerr (AO) is an Indigenous elder who introduced the word Dadirri to draw attention to the different ways that Aboriginal people in Australia listen. The word, concept and spiritual practice that is *dadirri* (*da-did-ee*) is from the Ngan'gikurunggurr and Ngen'giwumirri languages of the Aboriginal peoples of the Daly River region (Northern Territory, Australia). Dadirri is a form of deep active listening that is comfortable with silence. It is a way of listening to the sounds beneath the sounds.

This edition of *Soundscape* is about listening to the country that is always speaking in our lives. In the busy modern cities in which most of us tend to live there is no such thing as absolute silence—we are always immersed in the soundscapes that surround us—always the vibrations of many sounds are moving through our bodies.

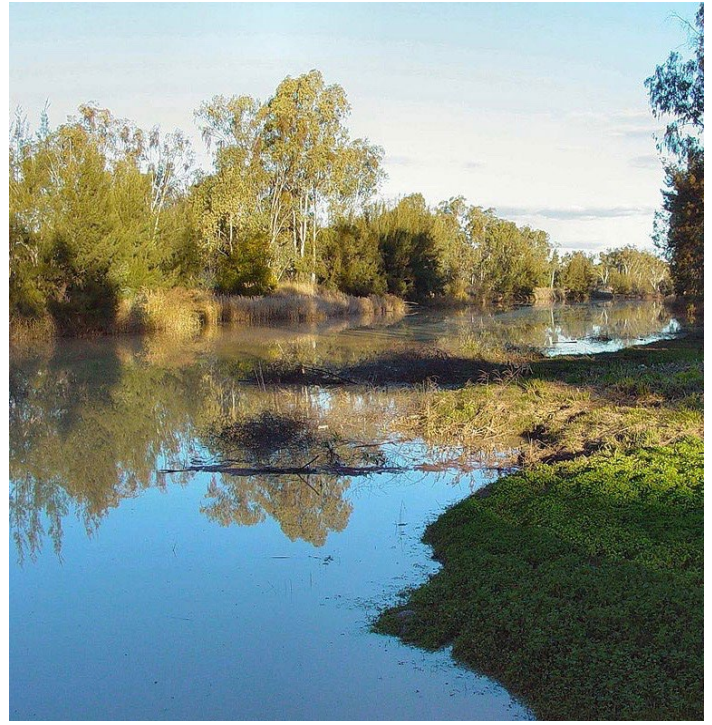
As you read these words, try to feel for the sounds that surround us—those we can hear and those we cannot quite hear with our ears. Underneath all those sounds is the sound of the country we stand in—ever present, ever speaking to those who would listen. Beneath the concrete and tar, beneath the steel and timber—far beneath is the metronymic sound of the heartbeat of the country.

To close this introduction of *Soundscape* the Gunggari words we started with are reiterated. The words we began with roughly translate as:

Hello, welcome everyone, the spirits of the land will watch over you, I see you—I acknowledge your existence and the existence of all our ancestors, I hear you, in this place I am listening, I am listening for the laughter of children in this place, may peace be within you.

Uwalla Ukamindiya. Yuunji dandhigu nagaya yindagu (the spirits of the land will watch over you).

Niya nulla noogalla niya yimbaya yadina undunoo yant el our ou.



Maranoa River, Mitchell, Queensland, Australia

DR. VICKI SAUNDERS is a Gunggari woman from South West Queensland. She has been an associate member of the Collaborative Research into Empowerment and Wellbeing (CREW) group in Far North Queensland and is currently working with the First Peoples Health Unit, Griffith University. Trained in psychology and public health, Vicki has been involved over the last 15 years in a diverse range of research projects with Indigenous groups and community based organisations across North Queensland, including acoustic ecology research supported by the Lowitja Institute. Her main research interests are using arts-led and poetic enquiry in the areas of child protection and family service delivery reform, Indigenous Research Methodologies and mental health research with a particular focus on empowerment, wellbeing and recovery.

GAYLE MUNN is a Gunggari Woman from South West Queensland. Gayle's primary interest for the last ten years has been healing the wounds of lateral violence. She is one of the four founding members of the Lateral Peace Project and has presented at State, National and International Conferences and Forums. In 2011-12 Gayle completed training as a Peace Ambassador. She holds qualifications and is experienced in Counselling, Hakomi Method, Mindfulness and Social and Emotional Healing, Mental Health, Training and Assessment, Life Coaching—Emotional Intelligence, Spiritual Intelligence and Radical Forgiveness.

Regional Activity Reports

Finnish Society for Acoustic Ecology (FSAE)

by Meri Kytö (chair)

Greetings from the 61st parallel north! The year 2018 was a busy one for the members of the Finnish Society for Acoustic Ecology. The FSAE has been catching its breath after bigger efforts made in the *Muuttuvat suomalaiset äänimaisemat* (*Transforming Finnish Soundscapes*) project (2014–2016), but still we are moving forward on our 20th anniversary year, actively promoting soundscape related research and art since 1999.

The year started with a bang as the *Muuttuvat suomalaiset äänimaisemat* e-book—with its research articles and soundscape descriptions from the Finnish public—was chosen the Book of the Year 2017 by Tampere University Press. The head of the jury, emeritus professor Jorma Sipilä thanked the book for being an exceptionally meticulous whole, opening up new perspectives and adding that “although the book is polyphonic and multidisciplinary, it still speaks to the reader with a surprisingly consistent voice. It can be thanked for both accuracy and sensitivity.” The FSAE was of course chuffed to bits for the award and being able to promote soundscape studies to larger audiences from the distinguished academic podium University of Tampere.

The 20th of February has traditionally been a day the FSAE organizes an event or similar. The day was originally chosen because it is the name day of Helinä (a woman’s name translated as “rattle” or “chime”). Last year the chore was to update the publications list on the website. It was about time: the list grew tenfold from the previous update in 2011. Doctoral dissertations have accumulated to nine, the recent ones being Olli-Taavetti Kankkunen’s dissertation on listening education in Finnish basic education and Ari Koivumäki’s dissertation on soundscape studies benefiting sound design. The number of peer-reviewed articles amount to over a hundred. In addition to these, one can find links to projects, recordings, reports and reviews in the list. Hopefully the list will continue to be a helpful resource for artists, researchers and students alike.

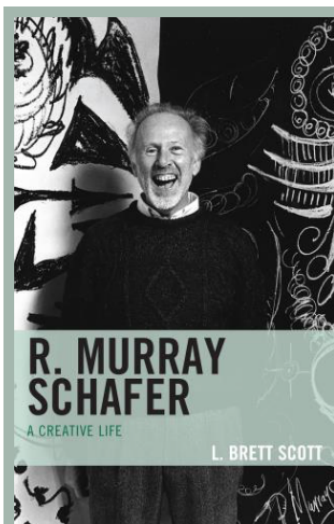
The endeavor for the year 2018 was to publish yet more studies and essays on soundscapes and auditory cultures: to edit a special issue for the *Musiikin suunta* e-journal, published in October (<http://musiikinsuunta.fi/2018/03/aanimaisematutkimus>). The issue—edited by Meri Kytö and Heikki Uimonen—contains topics ranging from supporter’s sounds in sports to soundscapes of stalking

in fiction films, from sonic frugality to metaphors of silence, from portable sound museums for the elderly and walking as an artistic practice (and three texts in English). It also contains an essay by Helmi Järviluoma on how soundscape studies started out in Finland in the end of 1980s.

The Listening map (“Kuuntelukartta”) is one of the main services the FSAE offers to people interested in documenting their soundscapes and listening to the recordings of others. The online map was given a thorough cleaning of its code (as it had aged a bit from 2010 when it originally launched) and is now updated, map interfaces, links and all. The other important online resource the FSAE maintains is the Soundcloud site, where we keep our public soundscape archive, edited field recordings, radio programmes, talks and snippets of interviews from research projects, e.g. the Acoustic Environments in Change project (2009) and the more recent workshop *Walking Sonic Commons in Venice*.

Continuing with collaborations with institutions other than society affiliates, the FSAE took part in planning the playful “Mind your brain!” exhibition in the Finnish Science Centre Heureka, and continued with Finnish public libraries in helping to design and take care of library soundscapes. Collaboration with Soundpocket in Hong Kong continued with an invitation to the *Art for radio? Radio for art?* symposium. A new collaboration was founded with The Finnish Labor Museum Werstas and its *Sounds of Changes* project on acoustic heritage, a cooperation between six museums in Europe. The FSAE chair delivered a keynote “Soundscape recordings, cultural brokerage and translatability of sonic experience” in the project’s yearly seminar. The popular three-hour live call-in program *Evening of sounds* (“Äänien ilta”) by the Finnish Broadcasting Company—with a strong representation of FSAE members commenting the soundscape requests in the studio—aired its twelfth program in October: this time the theme was sounds of commerce, trade and shopping.

The Helinä’s Day for 2019 involved a research seminar and a Listening map based on soundscape recording spree celebrating the 20th year of bringing “soundminded” people together. Lots of frozen environments to be heard, check out the FSAE webpage for updates: www.aanimaisemat.fi.



R. Murray Schafer

A Creative Life

L. BRETT SCOTT

R. Murray Schafer: A Creative Life is the authoritative exploration of the life and work of this preeminent Canadian composer, artist, educator, and activist. Working closely with the composer and his family, L. Brett Scott has created the most up-to-date and accurate exploration of Schafer. Scott draws on many public and private sources, including the composer’s own journals and correspondence, which have not been previously available to researchers.

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Book Details Author TOC Reviews

Rowman & Littlefield Publishers

Pages: 388 • Trim: 6 1/4 x 9

978-0-8108-8825-8 • Hardback • January 2019 • \$85.00 • (£54.95)

978-0-8108-8826-5 • eBook • January 2019 • \$80.50 • (£54.95)

Subjects: Music / History & Criticism, Biography & Autobiography / Music

For more info, visit: <https://rowman.com/ISBN/9780810888258/R-Murray-Schafer-A-Creative-Life>

Memorial

REMEMBERING NIGEL FRAYNE | 1952–2018

August 2018:

As I am re-reading some of our email correspondence, I am hearing Nigel's voice clearly again, chuckling at his dry sense of humour—*The WFAE is still the same old difficult beast that we wrestled with over the years*—enjoying his honesty and clarity; feeling respect and admiration in remembering how hard and persistently he worked, always listening, grounded in his dedication to the hard work of keeping the WFAE together and running; but most of all dedicated to a kind of truth in his life and work, making sure to stay humanly connected always, to family, friends and colleagues.

Sadly Nigel passed away in January 2018 after some years of challenging 'negotiations' with life. His tenacity during these last years of his life was inspiring. Nigel is survived by his wife and life partner Helen Dilkes, his son Viv, and daughter Ella. They accompanied him throughout this long and challenging journey, even traveling with him to Europe as he followed his passion for cycling.

Many of us were continents away from him during his last years and months, and I think I can speak for all of us who knew him, that we are deeply thankful to his family for surrounding our amazing colleague and close friend with their love and support, allowing and enabling him to live a rich life to the end, passing peacefully.

Nigel was a quietly powerful person, never making much of himself. One needs to check out his professional website <http://www.resonantdesigns.com/cv.html> to find out about the truly multifaceted nature of his work life and his expertise, quite apart from his voluntary role with the WFAE. Right up to the end, he was working on the design for the Walkabout Australia soundscape at San Diego Zoo Safari Park in California. A few months before his death he wrote that the new exhibit in San Diego was keeping him active, and that he had started playing with some old recordings of a band he played in years ago, just for fun and nostalgia.

He was unable to finish the San Diego soundscape. But astonishingly, his wife Helen and son Viv completed it in time for the official opening in May of 2018! An admirable feat and most likely it took unimaginable strength to accomplish this so close after Nigel's passing! It is yet another indication of the deep connectedness that existed between Nigel and his family.

In the following paragraphs I will reiterate words that I wrote in 2010 after Nigel had resigned as chairperson from the WFAE. (The original can be found in *Soundscape*, Vol. 10, Number 1, page 5.). Even though it is a repetition, I feel it is a good reminder to all of us who worked with him, and will give historical perspective to all those who were not part of the WFAE at that time. Besides, I could not say it in any other way today.

August 2010:

In the name of the entire WFAE I am transmitting here a wholehearted and deep Thank You to Nigel Frayne for his strong commitment and hard work during his twelve years as our chairperson. I will try to retrace here the role that Nigel has played in the development and growth of the WFAE. Humble and soft-spoken as he is, he will not like this attention focused on him! But the significance of his involvement cannot be underestimated, as it has been precisely his quiet strength and persistence, which have guided the WFAE out of its rather insecure infancy into a more confident, consciously functioning organization.



Photo by Helen Dilkes

The challenge to run and maintain the WFAE was more enormous than any of us realized at the time, because the people and organizations that are drawn to and become members of the WFAE inevitably come from a multiplicity of disciplines and cultures. How on earth could we find the focus under these circumstances in this very new field of acoustic ecology, which was only beginning to define and know itself? Nigel's persistence and patience helped to integrate this question into the ongoing process of building the new discipline and deepening our understanding of what it is we want to achieve as an ecological organization. Where many of us would have thrown in the towel Nigel remained calm, steady and firm in his belief that the organization would find itself, given the time and space necessary. When things seemed to happen at an unfathomably slow pace he continued to guide us through the silences and gaps with his subtle, almost unnoticeable leadership, never losing faith.

When I first met Nigel in 1996 I had no idea that the future first and long-standing chairperson of the WFAE had just walked into our life. It was clear from the start however, that Nigel was an ear-minded person, naturally drawn to acoustic ecology. His ways of listening perked up my own ears and I sensed right away, here is a new colleague for whom the WFAE would be a valuable context and vice versa, the organization would benefit from his input.

On this first trip to Vancouver Nigel had come to find out about the former activities of the World Soundscape Project at Simon Fraser University, the courses in Acoustic Communication and the workings of the relatively new World Forum for Acoustic Ecology. A year later after he had followed WFAE matters with great interest, including the International Congress of Acoustic Ecology at the Abbaye de Royaumont, near Paris in 1997 (organized by Ray Gallon and Pierre Mariétan of the Collectif Environnement Sonore) he wrote to me:

I was so disappointed not to have been able to get to Paris—so many of the 'main players' seemed to be there and I needed to meet people face to face. Never mind, next we'll try for Stockholm.

Wow, reading the minutes of the Paris meetings indicated a pretty

'interesting' (read tricky) discussion. There is so much still to be worked out for the future of the WFAE. At least something is happening which can be observed and learned from.... I'm looking forward to playing my part (however small) in working for WFAE's survival. No doubt it is going to take quite some effort and one day I'll be sighing like you. But that is okay. Acoustic Ecology (as such) has become a way of life for me now. And in that regard I have to say that meeting Susan [Frykberg], Barry [Truax] and yourself in Vancouver last year was formative in this process.

It did not take long until Nigel joined the WFAE Interim Board, which was formed in advance of *Hör Upp! Stockholm Hey Listen!*—as it turned out, a pivotal international conference on acoustic ecology in 1998 (organized by Henrik Karlsson of the Royal Swedish Academy of Music). Not only had Nigel contributed in a truly valuable, level headed and intelligent way to this board, he also had developed a vision for the WFAE.

In his quietly energetic way Nigel pushed the idea that the WFAE would be—in his words—a more manageable organization if it were structured into clusters of groups who administered themselves. Thus the idea of Affiliate Organizations was born. Despite some initial resistance, Nigel convinced most of us that instead of having individual members scattered all over the world it would be more productive to encourage the formation of regional groups who would be active locally: while it may seem that individual memberships provide a good income stream the downside is that those individuals are not active “on the ground” in their community—at least not in an organized way, and that is ‘ground zero’ for acoustic ecology.

Not surprisingly Nigel was elected chair of the WFAE at the 1998 Stockholm conference and remained in that position right up to the conference in Koli, Finland in 2010! From the beginning and repeatedly Nigel emphasized that the WFAE is not a separate organization acting on the world stage in isolation. Rather it is the ‘world focus’ of the member groups. Or in other words: the Affiliate Organizations are the WFAE and need to be responsible for running the WFAE.

His sense of humour shone through frequently as in this email where he made us all laugh and successfully ended an unproductive, wordy board discussion about future WFAE memberships: *Let's not get bogged down with scenarios that are not necessarily problematic. Too many members would be a nice problem for us to have to solve...* Or when the going was tough and the silence on the board became too much, instead of getting annoyed and impatient Nigel thought: *Somehow I need to inspire them to generate more involvement.*

In many ways Nigel has *been* the WFAE for many years, developing his vision for the organization into an ever more workable reality. By 2010 the WFAE consisted of nine Affiliate Organizations, who took turns in putting on conferences, publishing *Soundscape—The Journal of Acoustic Ecology*, and keeping an online presence through its website and newsletter. The expanded possibilities for global communication and travel have helped enormously in connecting culturally and among disciplines, but at the same time they have also created new and unexplored challenges. In Nigel we had found someone who was able to combine his vision for the WFAE with his own sensitive perception as a sound designer and with his practical know-how in how an international organization could manage its affairs through email, internet and a virtual office.

While his own business, Resonant Designs took Nigel to many places in the world, designing the soundscapes of a variety of museums, exhibitions, building environments and zoos, he also saw his travel as an opportunity to meet many WFAE affiliate members

in person. How often did he make a point of dropping in on Affiliates in various places, on me in Vancouver—sometimes for less than 24 hours!—on his way to or from Europe, Singapore, or San Diego, with the express purpose to meet face-to-face, brain storming upcoming tasks, solving problems, answering troubling questions, clarifying misunderstandings, making new plans for the WFAE or simply spending time? We all know how exhausting travel can be and thus can appreciate to what extent his tireless personal attention has brought us all together.

In 2003 Nigel organized almost single handedly, with the help from his family, some colleagues and friends, and on a shoestring budget an international acoustic ecology conference in Melbourne, Australia. This first-hand experience of planning and organizing a conference on his own home territory helped him to guide more effectively the organizers of future WFAE conferences. It had become clear over the years that acoustic ecology as a new field needed to assert itself as the central theme in each conference. This took an enormous amount of discussion and exchanges with individual conference organizers, sometimes visiting the places beforehand and helping realize the vision. Nigel was a driving force there, a catalyst, enabling others to pull off such a task successfully.

Whereas the initial acoustic ecology conferences had tended to consist of a series of often disconnected show-and-tell presentations from different disciplines, often only vaguely connecting to issues of acoustic ecology, recent conferences have become more focused in their approach. Nigel's vision became a guiding light in this context: to challenge presenters to link their own field (usually specialized in some area of sound) to acoustic ecology or better, learn to speak about their expertise in sound from the perspective of acoustic ecology.

Thanks to Nigel, the WFAE and its activities have expanded at a pace that was possible, given the many challenges: slowly and in keeping really, with the time it has taken to expand consciousness of acoustic ecology in all of us, that is, in keeping with a deeper sense of listening. Such consciousness, if allowed to blossom, cannot be pushed it seems. I have learnt through working with Nigel, not only to acknowledge such a pace but also to trust, that an ear-minded consciousness—a certain listening attention and creative presence—makes things happen in its own good time and in unexpected ways.

Epilogue

Although Nigel had tried to retreat from the position as WFAE chair for quite some time, it was not until 2010 that younger, energetic and committed people have come forth, willing to take on various tasks in the WFAE. This was wonderful and encouraging. It made his resignation possible. Although we said goodbye to him as chair, we were delighted that he continued to be part of the WFAE, offered advice where necessary and lent a helpful hand transferring his know-how, experience and wisdom to the next chair and the board. Right up to the end of his life, as the current WFAE chair Eric Leonardson pointed out, “Nigel was actively helping the leadership of the WFAE as Treasurer, and its Australian affiliate, the Australian Forum of Acoustic Ecology.”

And in those times of his life when work pressures were easing momentarily, he would report something like this: *I'm enjoying actually working with sound again, getting my ears dirty!*

—Hildegard Westerkamp

August 2018

Report from the WFAE President

For individual and affiliate members of the WFAE, this report provides a synopsis of many efforts that constitute the current state of the WFAE. As only an overview of significant events since the publication of the previous volume of *Soundscape*, this report points toward some of the promising opportunities unfolding now that only become actionable through participation.

Many noteworthy events marked 2018. Among them, two anniversaries. 25 years ago over a hundred people from around the world participated in *Tuning of the World: The First International Conference on Acoustic Ecology* at the Banff Centre of the Arts in Alberta, Canada. Here with R. Murray Schafer, Pauline Oliveros, Barry Truax, and Hildegard Westerkamp, an interdisciplinary host of contemporary media producers, philosophers, and artists founded a new organization named the World Forum for Acoustic Ecology (WFAE). Five years later, in 1998 the Australian Forum for Acoustic Ecology (AFAE) was formed.

This edition of *Soundscape* reflects the substantial contributions of AFAE's membership, who celebrated their 20th anniversary while co-hosting the WFAE-endorsed 2018 International Ecoacoustics Congress in June 2018.

Nigel Frayne was among those who came around and joined the WFAE in its early years. A musician and sound designer from Australia, his role in establishing the AFAE is noted in several remembrances here in this journal. Nigel became the WFAE Chair of a restructured organization in 1998, including international affiliate organizations from around the world. I met Nigel 11 years later, at the WFAE's conference in Mexico City. Thankfully, when I became WFAE President in 2012, Nigel stayed on as WFAE Treasurer, providing prompt, essential help and advice. I could not have managed without Nigel's help and support. His mentorship and collegiality were unwavering throughout the years, unlike anyone I have known. Despite his ongoing treatment, he was present until a few weeks before he passed in early January, 2018. As noted on the [WFAE News](#) blog, Nigel was a steadfast friend and supporter of the WFAE leadership of which I am honored to be a part. In his quiet and reserved way Nigel provided us, both in the AFAE and the WFAE, a gift for a new and younger generation of forward-thinking scholars, artists, researchers, and designers who will lead us into the next decade.

Next generation leadership in acoustic ecology and media aesthetic education was the focus of The Global Composition 2018, one of many WFAE-endorsed conferences held last year. This conference was the second since its inaugural first iteration in 2012, chaired by Prof. Breitsameter with her talented team of graduate students at the Media Campus of the Hochschule Darmstadt in Dieburg, Germany. In addition to the celebration of the 25-year anniversary of the founding of the WFAE, many workshops, papers, and presentations on sound, ecology and media culture were shared.

Reflections on the WFAE's first 25 years and the formal and informal conversations throughout [The Global Composition 2018](#) were enhanced by the presence of some of the WFAE's early founders, including Hildegard Westerkamp, Claude Schryer, and conference chair, Professor Sabine Breitsameter. As a special surprise, the WFAE honored one of its keynote speakers, Walter Tilgner with an honorary lifetime membership in the WFAE in recognition of his achievements in public engagement and science as a naturalist and field recordist. In his keynote, Tilgner gave a moving account of his life's work in words and sounds. Open discussions on "where to go from here" were essential for the outcomes of this conference. These were both exciting and challenging, especially for those who

come from countries where accelerating ecological and technological change leads to extreme differences and imbalances of political, social, and economic power. We are living in interesting times, to say the least. Of special value to the finely tuned convening was the extra investment in providing publicly accessible post-conference proceedings online in video.

Many have expressed interest in starting their own WFAE Affiliate Organization at The Global Composition and via email communications. I welcome these queries and place a high priority on providing as much help as possible. I invest significant time in supporting those who are interested in activating and engaging their local communities and cherish the professional friendships that grow out of these collaborations. It is important to emphasize the obvious: without active members, the WFAE simply cannot and will not exist. I encourage all members of the WFAE to emulate the example of Nigel's generosity of spirit and active mentorship as the most powerful way to grow membership and strengthen the work of our organization.

Together, WFAE Affiliate Organizations and Individual Members collaborate in creating a global vision for acoustic ecology. Currently, there are seven WFAE Affiliate Organizations in Australia, Canada, Finland, Greece, Japan, United States of America, and UK and Ireland. They represent the interests of individuals who comprise them and carry out activities in our network according to local, cultural, and national affinities.

Membership and participation are essential to the World Forum for Acoustic Ecology (WFAE)'s existence. As an international network of volunteers, the WFAE functions only as long as its members maintain its website, social media and listserv while persevering to publish our annual journal.

The positive outcomes of intense Affiliate Organization participation in conferences endorsed by the WFAE are exemplified in this case by their renewed vigor. For example, at the [Sound + Environment 2017](#) conference at the University of Hull, it was most gratifying when over 30 people signed up to get involved with UKISC, this following a long period of inactivity. Following the event, we invited conference director Rob Mackay to work with us and guest edit the next edition of *Soundscape* with a focus on acoustic ecology research in the UK. Additionally, Rob has joined the WFAE Board representing UKISC. In this way the WFAE can support its members, and in turn its members make our shared efforts such as the publication of *Soundscape* possible.

Two other groups are seeking to become active participants in the leadership and functioning of a dynamic and inclusive WFAE. One group is in Mexico, led by Luz María Sánchez-Cardona and Amanda Gutiérrez, forming a new group to supersede the former Foro Mexicano Ecología Acústica/Mexican Forum for Acoustic Ecology. The proposed launch of the new Red Ecología Acústica_México/Acoustic Ecology Network_Mexico is October, 2019, with a conference at the Fonoteca Nacional in Mexico City in conjunction with an International Immersive Seminar from the research group Practice as Research in the Arts, Transdisciplinarity, Sound and the launch of Leonardo Laser Talks Mexico in conjunction with the International Society of the Arts, Sciences and Technology (ISAST), hosted by the Department of Arts and Humanities of the Universidad Autónoma Metropolitana.

The other group seeking to become active in the WFAE is in Central Europe. Following the WFAE-endorsed conference of the Central European Society for Soundscape Ecology in Budapest, Hungary in early December 2018, an international group of more than 20

individuals signed an accord establishing the Central European Network for Sonic Ecologies (CENSE). Their mission is to convene "...organizations and individuals who focus on the importance of sound in the context of environmental concerns, socio-cultural development and contemporary art practices.... CENSE includes artists, researchers, scholars, cultural actors, interested individuals, and organizations from broader Europe." The signers are based in Hungary, Czech Republic, Slovakia, Croatia, Serbia, Romania, Poland, France, and Denmark. They will hold a series of conferences first in Czech Republic in 2019 and then Romania in 2020. Their Silent Manifesto is being translated to multiple languages and may be found, in the English version on CENSE's Facebook Group, and soon on their new website at cense.earth. Please visit the [WFAE News blog](#) for updates on this and other opportunities.

Reiterating one point from last year's report, on the constitution of the WFAE and its Affiliate Organizations, while most have defined themselves over the organization's 25 history on the basis of nation-states, *this is not a requirement* for membership as a WFAE Affiliate Organization. In fact, limiting membership to a single entity within national borders could be a potential obstacle to a healthy WFAE if a group's activity is hyper-local or spread across a vast geographic or cultural spaces, or if a population is so active that many groups are emerging within one country, or if a group defines itself as migrant or by criteria other than national borders. The only real requirement to be an Affiliate Organization is a shared point of interest in the ever-evolving field of acoustic ecology by an active group of individuals who self-identify and function as an entity aligned with the WFAE's mission. In this way the WFAE opens itself to many groups who are already fully functioning, but may not have felt welcome, as well as encouraging the formation of new Affiliate Member groups. All Affiliates are encouraged to be open, inclusive, and transparent to pique interest and inspire trust and move our shared mission forward to a widening sphere of people. Understanding of how local conditions and diverse people's needs and interests change is key to maintaining a vital, adaptive and effective organization.

Unlike other nonprofit organizations, the WFAE does not receive funding from any government agencies or universities. It is run entirely by unpaid volunteers. That is why memberships are so important for the WFAE. Working outside academic institutions offers individuals who are not in academia a pathway for connecting their research and helping establish their career independently.

In addition to Affiliate Organizations and Individual Membership the WFAE welcomes Associate Organizations with an interest in acoustic ecology to support the WFAE. They may participate in the deliberations of the WFAE's Board of Directors but do not have voting rights.

For the WFAE to be effective, participation is essential. All members of the WFAE create the content and are the WFAE's *raison d'être*. Effective participation requires us to be present, to identify

points of focus and make the connections with others who are either well-established or are seeking to find answers among the broad range of actors.

We encourage everyone to join the WFAE, either as Individual Members or through our regional Affiliate Organizations. We invite other established organizations to join us who may formalize their interest through the third category of membership, of an Association.

Individual Members have the same privileges and benefits as our Affiliated Members. As the majority of people live where WFAE Affiliate Organizations do not exist, please know that Individual Members are helping to grow the WFAE membership and cultivate leadership in new places. They serve as a support to those isolated individuals who join the WFAE in search of a supportive community, mentorship and encouragement. They strengthen the WFAE's understanding of our world. We welcome the knowledge and challenges that a more diverse and active membership offer.

Please visit the WFAE website and News page to learn more about our activity and resources. Updates are posted on the News page, and there's more news to come! WFAE also maintains an active stream of information and events on the Facebook Page and Twitter. WFAE is interested in sharing any relevant news announcements Individual Members may have. In this way our members create the content of our forum.

Some features and functions are being built and some have been restored, most significantly the online library. All WFAE members have the opportunity to continue building this important and accessible public resource. Please visit our [Library page](#) to learn how you can contribute.

The WFAE also shares information through its email listserv and social media channels, all of which I encourage you to subscribe and follow. Please visit our [Contact page](#) to subscribe to our email newsletter. Contact either [WFAE Secretary](#), Jesse Budel or me with your ideas, news, or questions.

—Eric Leonardson

April 2019

ERIC LEONARDSON, a Chicago-based audio artist, serves as the Executive Director of the World Listening Project, founder and co-chair of the Midwest Society for Acoustic Ecology, and President of the World Forum for Acoustic Ecology. He is Adjunct Associate Professor in the Department of Sound at The School of the Art Institute of Chicago (SAIC). As a performer, composer, and sound designer, Leonardson created sound with the Chicago based physical theater company Plasticene (1995–2012). Leonardson performs internationally with the Springboard, a self-built instrument made in 1994 and often presents on acoustic ecology to new audiences beyond art world contexts; engaging and connecting communities in the interrelated aspects of sound, listening, and environment.

The Acoustic Sanctuary: A Dedicated Listening Place.

by Ros Bandt

Focusing on auditory phenomena through the processes of listening and hearing requires us to inhabit time, to be present in the temporal continuum of place. By participating in the auditory moment, the continuously changing present can be more fully known through experience. The present becomes the past in a moment and activates memory thereby penetrating many layers of consciousness. What are we hearing, what did we hear? To stop still, to take time to listen is an uncommon practice in modern civilised white society. Listening requires a sharing of temporal space; it is a communal experience very much defined by the accumulated soundscapes of a place over time. Every site is an acoustic space, a place to listen. Acoustic space is where time and space merge as they are articulated by sound. An acoustic sanctuary is a place to contemplate our sonic habitat and the sounds we inscribe as significant. Sounds have meaning whether wanted or unwanted. In a sound garden, one can consciously include wanted sounds such as aeolian harp wind sounds. But we can also contemplate sonic weeds, sounds we want to eradicate, so that the sounds that are endangered and the sounds we want to preserve can be more audible. Sonic gardening. What is our sonic heritage? What do we understand about Australia as sung country and do our sounds collect in the collective consciousness of the dreamtime? We are sharing inscribed acoustic habitats, wittingly or unwittingly.

1. Hearing the Land, present and past

The land of the Australian continent is the primary source material for all Australians. It defines the commonality of place and belonging. Jane Belfrage in her thesis, *The Great Australian Silence*, defines why listening should be the dominant paradigm of knowledge in Australia. 'Listening to the soundscape is particularly important when we consider that the philosophical linguistic traditions of Australia have always been oral and aural. Text is a very recent human technology. The practice of text has only occurred here in Australia for a little over two hundred years, in some places, far less than that and in other places barely at all. It was in the soundscape that indigenous peoples' knowledges were published.'¹ Jane Belfrage argues for a change in perception to acknowledge the status of the ancient tradition of listening as a practice of knowledge in Australia. She argues that "the dominant paradigm of knowing is European, visual and scribal, in contrast to the holistic oral/aural tradition practised for so long in Australian Soundscapes."²

She points out that Australia's acoustic space is unlike that of any other land. Its dignity has been maintained by Aboriginal elders through the singing of their land for over 60,000 years. Australia has a history of place as acoustic space, one that can be revered and experienced.

Listening is another way of being, which inscribes and endorses silence. Not to listen in a land, which has been sung for thousands of years by many peoples, is to deny their existence, ever widening the gap of silence and endorsing the colonial imposition of *terra nullius*. The practice of listening has changed as the culture has changed. European colonisation has expanded to include a diversity of immigrant cultures including Asian and African cultures. Australia's

soundscape contains them all, but the foreign customs, beliefs and cultural practices have to be absorbed through listening and understanding. Only then can they be properly shared just in the same way that more time has to be given over to hearing and appreciating the cultural practices and desires of the original Australians. This is a never-ending process essential to the changing identity of Australia, a massive cultural and social experiment. The constantly changing sound environments in Australia reflect its buoyant cultural diversity. Sound inscribes place. It tells what is present and absent. Sounds are powerful indicators of the health of habitat and society, the biosphere, and water qualities, as well as changes in flora and fauna.

CASE STUDY: JaaraJaara Country: Goldfields Box Ironbark Woodland, endangered

Australia is a very ancient continent that has been sung by the first Australians since the beginning of the dreamtime. The first Australians are the longest continuing culture on earth. It is hardly surprising the land is sacred to them. Country has been carefully minded for more than 60,000 years without interruption until the British stole it. The bitter truth is that colonisation brought brutal wreckage, the desecration of people, (massacres, missions, mental illness, racism, abuse of women and chemical eradication), ruination of the land itself, (farming hooved animals and sowing inappropriate crops, mining, fracking), water damage by over-farming, pollution of the water



Treetops, The Acoustic Sanctuary. Photo by Ros Bandt.



JaaraJaara Elder Uncle Rick Nelson (voice, clapsticks) and local Murray man Ron Murray (didgeridoo), 'playing in' the 106 string aeolian harps before the *JaaraJaaraSeasons Event, 2013*. The playable wind harps sing country in honour of Aunty Alice Kelly, Mutti Mutti elder who inspired me so much in Lake Mungo, and told me to "keep the harps singing, they bring blackfellas and whitefellas together." (1992). You can hear and see the video of the live welcome to country on the Hearing Jarra Jarra website: www.hearingjaarajaara2013.wordpress.com.

supply through stock defecation, damming of the Murray floodplains and irrigation, loss of wildlife species. Fragile environmental balances that took years to establish, such as indigenous eel traps have been broken through denying land access, a metaphor for the physical, psychological and emotional health of the nation's culture.

The soundscape has mirrored all of these changes over the last 300 years but the western world has not been listening. The supremacy of the gun over the spear changed the soundscape forever. *The land and its people are scarred. Australia must be cared for and shared, LISTENING to the indigenous custodians for it to heal.* The land of Australia is the only thing we Australians from every part of the world share and we should all be fully involved in making it the healthiest nest it can be for all inhabitants, just as the first peoples have cared for it for 60,000 years so softly, minding food, water and the dreamtime connections of the land.

The box ironbark woodland forest in north central Victoria was not exempt from misguided and inappropriate plundering. "There was irrevocable spiritual and physical disruption to connection to

country caused by the Europeans" https://www.bendigo.vic.gov.au/sites/default/files/2016-09/FINAL_REPORT_Aboriginal_History_June_2013.pdf

Overfarming, gold and copper mining, tree cutting, the introduction of rabbits, foxes, gorse and blackberries, pests and foreign diseases are all described by indigenous voices. In his indigenous "short history of the JaaraJaara area", Uncle Gene Roberts outlines the statistics of the loss and harm. The remnant outcomes are terrifying. <https://en.wikipedia.org/wiki/Djadjawurrung>. See massacres, disease, clans, names.

HABITAT Description: the Physical Space: IMMEDIATE ACOUSTIC CONNECTION

The decision to acquire the 55-acre property in this region was a sonic love affair from the start. On the first visit, I sonically identified 5 species of frogs. This meant it was well on the way to being regenerated. The sounds echoed all around the valley. I was seduced. This love affair with the sounds of the natural environment never errs. By making it land for wildlife we wanted to continue regenerating it and

be able to maintain this off-grid substantial wildlife corridor from the town to the national forest. From the outset it was to be a quiet place, no introduced sounds, fast cars or motorbikes, no smoking, take your rubbish with you.

The shape of the land as acoustic space is awesome. The 5 sets of natural north facing rises to the south boundary form an amphitheatre array down to a small intermittent stream tributary. Water has been introduced in 2 large artificial dams and smaller ponds. The dams have grown sedges and frog communities expanded. This little plains brown tree frog was conceived in the kayak at the edge of the dam in 2016, and it is his home. His signature call can be heard most of the year, 3-5-7 slowly repeated grating notes creeeee-creee-cree- cree.

Mullock heaps, blackberries, a broken water race, a polluted natural swimming pool adjoining pastoral land and a sheep eaten meadow came with it.

Over the 25 years, all the motor-bike and jeep tracks of the former owner have overgrown, changing constantly according to the seasonal needs of the kangaroo population which has always been vast. They are making their track over this mullock heap, also becoming overgrown with the Cassinia bush, so important for understory regeneration nitrating the soil.

There are only kangaroo tracks now and no fences apart from the high south boundary where goats and cows have been introduced as a small venture by the neighbour. Moos and bleats are sometimes heard from this denuded place floating down the hill through the bushed amphitheatre.

It was after some years of being in place with all our senses off-grid living slowly in the rhythm of the land that we realised what we were in, an acoustic sanctuary, a place to celebrate the sounds of an endangered habitat. When local Murray man Ron Murray gave me some ochre left over from a children's workshop, I went home and painted the words above the shed: *Acoustic Sanctuary*.

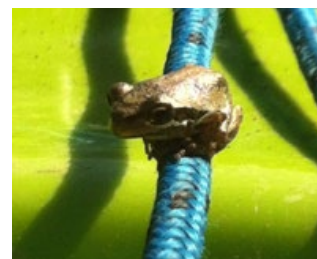


Acoustic Sanctuary Doors. Photo by Ros Bandt.

I realised how fragile man/nature relationships are and how easily this place could be wrecked by human greed. Later in 2013 he and uncle Rick would play in the Aeolian harps, which further added to the sonic identity of the place. 106 strings, blessed by Aunty Alice Kelly at Lake Mungo seem to have found their way back here, gifted from the RedCliffs High School where they were commissioned by Steve Naylor, woodwork teacher at the time, (1989).

The Acoustic Sanctuary at Fryerstown has evolved slowly over two decades. The biodiversity is continually being documented since becoming Land for Wildlife in 1996. Several generations of owl nightjars maintain sovereignty in the shed unless the powerful owl

returns to the tree by the back door. Grey shrike thrushes breed each spring in the eaves and a pair of olive backed orioles inhabit the south side. The crimson rosellas colonise the bridge over the streamlets in the stands of mature grey and lemon box. They share the upper storey with corellas, sulphur-crested cockatoos, choughs, magpies, and currawongs.



While the superb fairy wrens, robins and weebills dart into the scrub near the ground, by the waterholes herons, egrets, cormorants, native ducks, lapwings, wait their turn. On the side of the track, bronzewing and crested pigeons guard entrance to the place while further along, pallid cuckoos, bush wrens, thornbills, weebills, fantails, willie wagtails are stable nearby residents. Jacky winter and scarlet robins are widespread breeding residents. This ensures a myriad of aerial sound composition as they go about their business in temporal layers of intricate complexity, a sonic composition.

Box ironbark dependent fauna include many endangered species of birds, woodland brown and white throated tree creepers, mistletoe bird, regent honey eater, coming at the flowering times for the sugar food of lerp and pollen. Other elusive presences are the rufous honeyeater, swift parrot, and small marsupials, phascogale, antechinus, tree goannas, skinks and stumpy tailed lizards. Micro bats and native bees, termites, underwater yabbies and aquatic invertebrates, small crustaceans and insects are being further investigated both scientifically and artistically. The tiny orchid season, Bom, meaning 'orchid' is particular to this area being the 7th aboriginal season, named Guling here.

SONIC CALENDARS

For 25 years the area has been recorded in nature diaries, sound recordings, video and photography, and occasionally shared with the public through on-site public performance events 2013/2018. A CD of the *Jaara Jaara Seasons*, 2013 was published by Hearing Places. This major bush symphony is derived from the site-specific sound recordings made throughout the 7 Jaara Jaara seasons. This celebration of country with multi-cultural musicians and associated art projects are digitally documented on the dedicated website, www.hearingjaarajaara2013.wordpress.com.

This first annual audio-visual calendar of the box ironbark endangered woodland forest habitat shares observations, history, language, flora and fauna, sound recordings over the calendar year 2013. It is thrilling in 2018 to now have a printed calendar produced by the local indigenous children made with aboriginal elders and volunteers knowing that the continuity of land attachment is surviving. *Our Mob's Seasons Calendar, The Meeting Place*, has been created by Aunty Julie McHale, Aunty Kathyrn Coff, Phoebe Barton, Cath South and many volunteers. In creating it, the Meeting Place created art, dance, song, ceremony and writing about the seasons. We hope that Uncle Rick will bring them to the acoustic sanctuary to sing one of their newly created songs.

SOUNDSCAPE RESEARCH & ADVOCACY

Further study is being done on monitoring the changing soundscape here as the acoustic environment is always changing in the air and in the water. Hydrophone recordings have been made here since 2004. You can hear some online.

The acoustic sanctuary as an acoustic lab is becoming more detailed and scientific. In 2020 a 24/7 microphone live feed will be put in the sanctuary and available for listening on line. Students from Griffith University and USC Sunshine Coast will decode the data, calibrating presence and absence of sound over the long term with

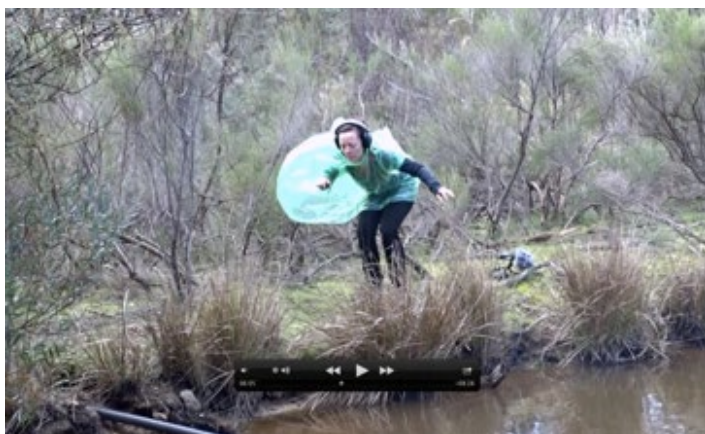
the help of Dr. Leah Barclay. This site is a biosphere lab for scientific acoustic habitat study, but as well, it is a continuing poetic inspiration for sound art and musical composition and collaborative projects. The aeolian harps in the garden may be singing the land?... on the whispering wind. Can you hear them? You can focus on the natural harmonic series of the just intonation changing polyphonies, or be taken to heaven by the beautiful sound. If you can't hear it put your ear to the sculpture's posts, and pluck a string, or just wait for a stronger breeze to set them off.

QUIET: AWARENESS AND THE ANTHROPOCENE

Australia is a sung country with an acoustic history. We need to listen to understand where we are and what is happening. The absence of sound is just as indicative of the soundscape and its changes as the sound itself being present. A major concern is the 800 percent increase in aircraft noise over the 22 years. Human air travel is out of control as greedy capitalist humans feel they can fly wherever and whenever they like. The flight apps now confirm that if all the planes tried to land at once, there isn't enough space for them all to land. Our neighbour has a light joy-ride plane which often circles over our property. I wonder how the habitat is being affected. It certainly disturbs the peace and quiet. We can identify the 9.30 and 10.30 Emirates flights to Athens and many other planes, now running on the hour and half hour at certain times. (A plane is going over now as I write this). Percy Grainger warned about living in the age of flying in his free music statement of 1938. Are we caring for the upper atmosphere?

What about the health of the water in the artificial dams?

In a reevaluation of human/nature relations, a spontaneous artistic work was created between two hydrophone recording sound artists Vicki Hallett and myself and a performance artist Georgia Snowball. All three have spent years listening to the region and had visited the acoustic sanctuary previously. I wanted to create a situation where the human becomes immersed in a non-human world through sound, that of the underwater symphony created constantly in one of the freshwater dams. Georgia had never heard these sounds before. Wearing headphones she responded to these unfamiliar sounds with her whole body, translating the audio into kinetic at the moment of audition; firstly a warm-up through one powerful marine hydrophone and then a longer event listening to Vicki's six channel array of different hydrophones in order to catch the different frequencies with more detail and spatialisation. A video was made of these events by Arthur McDevitt. After the first take Georgia came out of her sonic immersion smiling into the human world of speech, "it's so intense". She had become totally immersed in the little heard sounds of ecology in action. We need to spend real time auditing the fascinating changes that are weaving around us constantly in order



Georgia Snowball, AUDITORY DANCE, being an aquatic participant, at one with the underwater sound ecology, sound into movement, captured on film.

to know more about our place in the sonic world and how to look after it in a mindful way. An underwater calendar will be made in the future. Artworks emerge in their proper time and can share these new experiences, art, sonic ritual, ecology, performance, science all melded together.

This experience became an exhibition in a two-day free event Freshwater Listening, celebration of water as a life-giving substance, an investigation through sound of the dams in the sanctuary (www.hearingplaces.com/freshwater-listening.html).

It was a national event celebrating twenty years of acoustic ecology in Australia with the Australian Forum for Acoustic Ecology. Leah Barclay, Vicki Hallett Andrew Skeoch, Jon Drummond, Guildford Vineyard, and the local Fryerstown community came together with me to host free hydrophone workshops, scientific presentations on underwater creatures, field recording, artistic processes of night exposure photograms on water, and surround sound compositions—one made from the participants recordings at the site the following day. This huge sound mix was ably handled by Leah Barclay with musicians Vicki Hallett (clarinet) Ros Bandt (tarhu), Brigid Burke (clarinet), and Megan Kenny (Flute), and public sound makers improvising together. Primitive water timers and fountains were manually kept going by new residents to help us reconsider the scarcity of water in this area and to take care of it. In the gallery, I curated the Freshwater Listening exhibition. Georgia's Freshwater dancing video was continuous and auditors could listen to the 6 channel mix of the hydrophone recordings made the same day as the video by Vicki Hallett and Ros Bandt.

The summary of this extraordinary event, written a few days after it occurred can be found in the short report from AFAE and in the event reviews towards the end of this journal.

EDUCATION: EXPERIENTIAL SITE VISITS

Most city dwellers have no concept of contacting Australia's long and continuing unique sonic fabric. The Acoustic Sanctuary offers this perspective on caring for country.

When a heritage group interested in a UNESCO listing for the Goldfields visited the sanctuary, I asked them to respect the quiet and those that have gone before.

They felt self-conscious being still and quiet, away from their power-point presentations. Listening together is an uncommon experience. After a while they tuned in and had fascinating responses. We are not trained as an oral/aural culture as were the first Australians.

A printed leaflet is available, but I tend to keep it as a leaving present, something they can think about again later as to what the experience might have meant. The questions it asks are below as a means of provoking modalities of listening and reflections through sound.

SITE LISTENING: ENGAGING WITH SOUND.

BE STILL. QUIET.

CONSIDER WHAT IT MEANS TO SHARE THE SOUNDSCAPE?

Be aware of the sounds you are making.

WHERE ARE YOU IN THE COSMOS?

Listen for a while, all around, standing, up down, in front behind, lying down, locate moving sounds, distant sounds, tiny sounds.

Listen to the breeze in the scrub, the trees, the harps.

Listen inside to the harmonic series, the particles which move and shape sound.

Listen to the sound underfoot, how dry is it?

Listen and locate other moving sounds.

What is happening in the upper canopy, or behind you?

Listen to sounds recorded in water through the hydrophone, on the CD JaaraJaara Seasons.



Freshwater Listening Exhibition 2018, Tate Gallery, Fryerstown. Photo by Ros Bandt.

Listen to sounds at night.
 Compare them with diurnal sounds.
 How do sounds change with the seasons?
 Which sounds are familiar/unfamiliar
 Which sounds are special to this area?
 Listen for a long time... over the course of the year

See www.hearingjaarajaara2013.wordpress.com, an audio-visual digital acoustic sanctuary online.

SOUND AS INTANGIBLE CULTURAL HERITAGE

Why do some cultures have heritage soundscape studies in their consciousness and built into their language and others don't? Japan's government has implemented its 100 soundscapes of Japan project marking their 100 most iconic sound places with markers for all to share.

In the western canon of sound research, sonic archeology, archeoacoustics, sonic geography, place studies, ecoacoustics are new fields of research, building on what has come before. Acoustic ecology expanded across the globe in 1993 in Banff, Canada with the formation of the World Forum for Acoustic Ecology—inspired by Murray Schaffer's seminal book, *The Tuning of the World* which was written in 1977. Australia has a unique sonic lineage. The aboriginal concept of deep listening *dadirri*, could be over 60,000 years old. Australia is a sung country. Why is so little attention paid to this? Acoustic ecology rarely pays attention to the indigenous aspects of Australian culture. We need to do more. Which sounds should be classified for



2013 Jaara Jaara Seasons performance, Acoustic Sanctuary.

sound heritage by whom? Why? For whom is a sound significant? Where? When?

LINGUISTICS

What are the spoken sounds that have gone before? How many aboriginal languages are extinct? living? migrant languages?

Naming places? How many aboriginal place names can you translate? How do you say them properly?

See Linguist Stephen Morey on JaaraJaara website:

www.hearingjaara2013.wordpress.com.

Listen to AWAYE by Daniel Browning on the ABC and you can learn aboriginal words each week pronounced by elders.

<http://www.abc.net.au/radionational/programs/awaye/>

MUSIC

JaaraJaara meeting place mob is composing new songs with children now to fill the gap from their lost traditional music. The song Rick sings at the Acoustic Sanctuary in 2013 is not from his own group, a tragic disconnect inflicted by colonials banning them from speaking 'lingo'.

Why is music classified as sound heritage?

Compare the UNESCO intangible cultural heritage credentials with the Australian National Film and Sound Archive heritage register. The ABC list of Australia's significant sound.

What do you think Australia's sound heritage should be?

BUSH VISITS BY APPOINTMENT

To visit is a full bodied immersive, still listening event, an opportunity to be in place to spend time listening. Despite having to walk in (no cars), it is not a soundwalk environment which disturbs the habitat. Wildlife have priority.

Visits to *The Acoustic Sanctuary* are by appointment and donation. No electricity, no cars, motorbikes, no dogs, no smoking, no phones, no facilities. It's a pleasant walk from the Fryerstown school which has facilities.

The Acoustic Sanctuary is a place to reconsider man/nature relationships and a place to uncover hidden sounds. Listening to country requires tuning in and being mindful (See Le Tuan Hung, *The mindfulness of listening in 2007 Hearing Places*, Cambridge Scholars Press). It's a wildlife habitat.

THE BUILT ENVIRONMENT

Where we live. What the local soundscape means.

The Acoustic Sanctuary shack has been there for over 30 years, off grid, with no communications. No other human dwellings. It's a shelter, in JaaraJaara—*Larr* meaning roof. Every time you build or move a wall you change the soundscape. What directions are we taking to improve our acoustic environment of the dwellings we live in and their relationships to the environmental context?

Here in the shack, it's a slow shed, not much more than a humpy made from gum logs, found stone from the sandstone reef on which it sits and recycled tin. Many doors open out to hear the beautiful box iron forest "in its manner of operation" as John Cage would say. Small toadstools are just outside the door.

It's a place to listen, ponder, reflect, create with Australia's stunning box ironbark habitat.

Fill the kettle from the tank, light the fire and wait. Boil it. Drink the water when it cools down.

Leave no trace. Take your rubbish away.

We need to care for our nest wherever we live. Listening is a constant barometer. It needs constant tuning and is always changing as is our sung country. Care for it wherever you are.

About the Author

DR. ROS BANDT: Honorary Senior Research Fellow in Sound Culture E-scholarship research, The University of Melbourne. On her 3rd ARC grant she became the Founding Director of the *Australian Sound Design Project*, the first on-line data base and on-line gallery of Sound Designs in Public Space in Australia. She has pioneered sound sculpture, sound playgrounds, spatial music,

spatial interactive installations, written the definitive book on her first ARC grant, and installed whole buildings in sound and light (Grainger Museum Melbourne International Festival). She was winner of the Sound Art Australia prize, the first woman to win the Don Banks Award for their life's contribution to Australian Music and received the Fanny Cochrane Smith sound heritage award from the National Film and Sound Archive. The resonant sounds of her first vinyl, *Improvisations in Acoustic Chambers*, wheat silos and water tanks, 1989 is in the NFSA register of Australian Significant Sound. She has lived from her international art practice since 1980 and was the inaugural Benjamin Cohen Fellow for Peace and Innovation at Ball State University USA. She is a founding member of the World Forum of Acoustic Ecology and curated 2 sound exhibitions for the Australian Forum's hosting of the international conference at the VCA. Her book on Sound Sculpture was launched by Murray Shafer at this event. In 2017 she was invited to be guest artist for the Animart festival in Delphi, creating 5 nights of discreet *Sonic Metamorphoses* in the ancient sites of Delphi with international artists, dancers, and colleagues Dr. Jon Drummond, (streamed sound), and ancient Greek scholar Arthur McDevitt.

Her music and installations have been exhibited on 5 continents where she continues to collaborate with many international artists. She has been a founding member of 5 ensembles including Trio Avium (Baroque) and Birdsong (electro-acoustic), the multi-cultural Back to Back Zithers, and La Romanesca, Australia's pioneering early music ensemble, touring with them for 30 years. She has been commissioned by the WDR, The Paris Autumn Festival, Radio Wien, the Audio Arts unit of the ABC and her works are published by Wergo, New Albion, EMI, Schott, Move Records, Sonic Gallery, Pozitif, Double Moon and Hearing Places.

Learn more:

<https://animartgreece.eu/2018/en/tutors/bandt>

www.sounddesign.unimelb.edu.au

www.rosbandt.com

www.hearingplaces.com

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Binaural recording at the Acoustic Sanctuary. Photo by Ros Bandt





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Intersecting Place, Environment, Sound, and Music

by Vanessa Tomlinson

This paper explores both how and why composers in the twenty-first century have such an active engagement with the environment. Why is the *place* of music making so important right now? I propose that composition that intentionally interacts with the environment changes the way we listen, deepens the listeners' connection with the sonic material, and also activates our relationship to place. Furthermore, these compositions leave markers of cultural, social and environmental conditions at particular junctures in time. These considerations will be explored through an examination of six broad approaches to engaging with the environment in the making of sound-based art, some historical precedents with a focus on the Australian context, and then a look at some of my own site-specific projects.

The other morning I was reading an article about John Luther Adams in the LA Times referring to his new piece *Become Desert*; my facebook feed led me to listen to a new work by Liza Lim *How Forests Think*; my inbox received a soundcloud link about a new CD by GreyWing featuring a 2017 piece of mine, *Sonic Dreams: Extinction*; I received an email invite to participate in a large scale grant application that looks at Australian sound-makers engaged with place-based music making; and I am just recovering from running an experimental music festival in the bush *Easter@Harrigans Lane: The Piano Mill*. This is 2018, a time when scientists are arguing that we have crossed the climate change threshold, and artists' ability to communicate and articulate has gained renewed urgency. If artists are in fact a "distant early warning system" (as Marshall McLuhan suggested), then there is no doubt that addressing ecological issues through music must be a central concern. This article looks at the ways in which composers and improvisers of today are addressing ecological issues, while tracking how we consider our environment in sound making activities.

The environment, or the *place* in art, has long been a vital part of art-making, with music and sound-based art-making no exception (Tomlinson & Wren, 2017). The acoustic environment of cathedrals clearly inspired a kind of composition, a musical pacing, harmonic relationships, ideas about spatiality that may not have evolved without the concept of the cathedral first (Blessner, 2007). The talking drum that can bounce off river gorges and communicate information over long distances would not have evolved the same way without the acoustical advantage of that topographical peculiarity (Carrington, 1949).

So too in composed music—Gustav Mahler lived in a particular mountainous environment, with close proximity to domesticated animals. John Luther Adams has written extensively about how his living environment of Fairbanks, Alaska, became an inseparable aspect of his compositions of that time. In song too, place makes itself known. Even Christmas songs—Sleigh Bells Sing—can be about place (made crystal clear to those of us living in the southern hemisphere, in snowless areas, celebrating Christmas in the heat of mid-summer). The bell is a navigational device, needed through the fog and snow-enclosed weather of mid-winter, with the bell being transformed from literal sleigh bell, to an instrument we now call "sleigh-bell" that represents this sound. So too sounds like



Listen (Vanessa Tomlinson), Piano Mill 2018. Photo by Tangible Media.

almglocken (again harkening to Mahler) situate sound in alps, but the cowbell associated with jazz comes from the Kentucky cowbell, and the Condamine Bell from Australian droving history has a completely different sound again. In these examples the soundscape of the roaming cow is represented through the local alloys and blacksmithing of the bell, and has entered musical language in vastly different ways; environment is mapped in to the instrument.

Music is often designed for a particular site—a concert hall, an outdoor stadium, a particular speaker array. A site-specific performance can be an outdoor music festival with loud speakers and no intent to interact with the already sounding environment. It can also be a performance that intentionally co-exists and interacts with the environment. We know that numerous composers have been engaged with environmental listening as a primary compositional material including Edgard Varèse and Pierre Schaffer listening to cities, R. Murray Schafer listening to soundscapes, and Pauline Oliveros' practice of Deep Listening. As an extension of these approaches, I have been thinking more broadly about how composers approach environmental music making.

We might think of this area of study as akin to the Environmental Art movement from the 1970's—looking at how land art, environmental art, and place-based art intersect. While sound-based art was also happening in the 1970's (Schaffer, Alan Lamb, Ros Bandt), there has been an explosion in this area in the 21st century, perhaps mirroring re-activated awareness toward climate-change and the anthropogenic impact we are having in our time on this planet.

This paper proposes various approaches to sound making in the environment, inclusive of built environments and naturally formed environments. It is not intended to be an exhaustive list of activities but an invitation to consider this field as a whole, and to unpack some of the impetus behind individual sound-maker's decisions to engage so deeply with place. How can a sound artist bring about new understandings of place? How and where are these understandings expressed in performance? Can artistic work affect change in a site, leaving memories, transformations, fragments? Can site-specific performance lead to new knowledge, new

relationships, new experiences, and new discoveries about place? Can it contribute to our understanding of spatial variation and temporal variation? Contribute to our understanding of geophony, biophony, anthrophony?

Because this field is so broad, the case studies mentioned below are all centred in the Australian context, already a unique site for interacting with environment. The land here has been walked upon, listened to and sung about for well over 60,000 years. The connecting feature of these projects is listening, and so I will begin the paper trying to articulate an understanding of environments through approaches to listening—part 1, before trying to categorise the use of the environment in sound-based art to conclude part 2. Part 3 will look at aspects of my own practice—also all Australian-based projects—that apply some of the terminology and methodological frameworks, to share more case-studies that examine a broad approach to making sound in place.

PART 1

Musicalising the Typology of Listening

In 2008 Rebelo, Green and Holleweger proposed a Typology of Listening (Rebelo et al., 2008) that considers mobility of listeners experience in the built environment. While their approach comes from landscape architecture, the applications of their lexicon to sound-based practices can provide additional language to listening beyond the concert hall. Reflected in these listening activities is the way in which humans navigate through their listening environments, making decisions to physically go towards or away from sounds. This consideration is around the proximity of and the intensity of sound. It begins to expose commonplace changes in our sounding environment; the ubiquitous ambient drone of and in buildings (air-conditioning alongside many other electronic drones), music in restaurants so loud that conversations are not possible; traffic noise being masked by other noises. Central to this typology of listening are three categories; the Theatre of Listening, the Museum of Listening and the City of Listening, which help us understand compositional approaches to listening in place.

Theatre of Listening

The Theatre of Listening is familiar to most of us as the concert hall, a space with set seating, providing a particular physical relationship to receive sound, and a clearly marked stage area indicating what is to be listened to. Implicit in this relationship is that even though there are many other sounds in the space—electrical hums from video projectors, air-conditioning, stereos—these are not part of the listening field. So too, accidental sonic additions such as coughing, whispering are also undesirable additions to the sonic field. This is the very model that John Cage challenged in 1952 with his piece 4'33”.

In the Theatre of Listening there is a clear entry into this listening environment and a clear understanding of how to situate oneself in the listening experience, usually in a prescribed seat with a particular code of conduct that governs the experience. One can stay or go, but leaves generally after the listening is “complete”. The individual is not in control of the duration of the listening experience, and does not have personalised volume control, or perspectival control; one receives information.

Museum of Listening

The Museum of Listening can be thought of as entering a space where things are already happening—an art gallery, a shop, a museum. There is a clear entry or threshold to cross to enter this environment, and once inside, the individual has agency about where to place their listening self—standing, sitting, walking, hiding. Their body can become the volume controller as they walk towards

speakers/performers/sounds or away from them, and their body can also make aesthetic choices as they choose to leave a space or re-orient themselves within the space. There is a labyrinth of routes to which sound can be experienced which is always in flux and in motion. The threshold of entry and exit is important in this listening environment, and the self-determination of the listener also vital.

In musical terms this kind of listening experience has not been overtly exploited, although it is becoming increasingly common with large-scale performance pieces like *The Sound of 84 Pianos* (Griswold & Tomlinson, 2017)

City of Listening

Within the City of Listening we lose the clear entry or exit point, and therefore there is no clear idea of when the listening experience begins and ends. This does not mean that there cannot be intentional foregrounded sound added into the environment, but that it will be added in to an environment already rich with sound. The individual is navigating their own way through space with no listening rules or physical limitations. Each individual can choose how and when to activate their listening experience. In the City of Listening we can think about soundwalks, and the idea of a guided listening tour through a particular place. Or it can be a self-made listening experience, tuning in and out of various pre-existing activities—the blacksmith, the streetsweeper, the airplane etc. The City of Listening is not limited to the city as such, but to any space where there is no clear entrance. Performances in nature are happening in the field of the City of Listening; there is an active soundworld which becomes a central part of the listening experience.

Adding to this lexicon is another tripartite –intentional sounds, interruptive sounds, and masking sounds– again building blocks for understanding our listening environments, and our listening priorities. These categories are always in flux and interact in different ways. It is in fact the listener that most often makes the decision about what is important to be heard. Think about a person giving an important address in a crowded space with glassware, eating, some talking and a sound system that does not project to the back of the room. You can strain to listen to the speaker through the fog of noise, or your listening attention can be diverted. You can listen to the intentional sounds, the interruptive sounds or in fact the masking sounds. This kind of re-orientation is common when dealing with sound in the environment, and can become a point of focus.

The masking sound discussed here is a particular ubiquitous sound in place which blocks out entire frequency bands. This could be air-conditioning (whether inside or outside), the ocean, traffic, a distant waterfall. The ear is extremely good at removing these sounds from the field of listening, and focussing in on the intentional sound. However, it might be possible to highlight the masking sounds, and bring attention to them, as in *Circular Ruins* (Marks, 2015) when the drone of the Wheel of Brisbane gets used as a harmonic layer in a site-specific composition. This reorientation of a continuous everyday droning sound became the central thematic material of this work, transforming an object into an instrument, and an inaudible sound into an active part of the sound environment—relocating the sound as informational and relational.

Interruptive sounds are usually the sounds of distraction, sounds that are out of context, too loud, or too inappropriate. The coughing in the concert, the motorbike revving through city blocks, the galahs fighting over food supplies. These sounds might disturb a level of comfort, tranquillity or peacefulness. In the Australian context, we are perfectly aware that nature is not tranquil, and is full of the unintentional demanding our attention, demonstrating that unintentional is of course a subjective perspective. The listener chooses when to listen and what to listen to.

Intentional sound is the foregrounded sound; the performer on stage, or the orator speaking. The speaker mentioned earlier,

is the intentional sound, but interruptive sounds were distracting from the listening experience, causing something of a cognitive dissonance. The ocean can traverse from being a masking sound, to the intentional sound to be enjoyed and focussed upon, to being an obstruction to hearing the thing you are trying to focus on. Proximity, orientation, perspective and attentiveness are all basic and variable building blocks for interacting with sound, and are all active agents in the upcoming discussion around modes of interaction with the environment from the perspective of the sound-making artist.

PART 2

Modes of sonically interacting with the environment

I would like to propose that we can align environmental listening-based compositional and improvisational activities into six broad categories of exploration; 6 modes of interaction with environment, embodied approaches, contexts, methodologies etc.

These interactions could be interdisciplinary, and in fact it would be interesting to apply these approaches to studies in poetry, dance, performance art etc. The fact that the categories focus on sound is only to shine a light on historical approaches to sound making with environment in order to build an understanding that can be used across artistic disciplines and also across environmental disciplines—especially with respect to environmental studies.

Broadly speaking, the six categories of engaging with the environment to make a musical work are:

- Recording the environment for use in compositions;
- Listening to the environment to prepare for composition;
- Site-specific environmental performances;
- Constructing an environment in which listening will occur;
- Harnessing the environment to make sound;
- Using environmental data to make compositions.

These categories are all considering the environment from different vantage points, dissecting or intuiting sonic behavior. The boundaries between the categories are not fixed and of course there is fluidity and overlap between these propositions. The more important question is how these divisions, categories and theories make sense of the art being made. I will first look more deeply into the categories of sound-based engagement with the environment to expand upon the potential inside each perspective.

Secondly, I will look at the emergence of my own practice of building large-scale work, using the framework of listening and categories of environmental engagement to analyse what the artist can bring to environmental studies, and how our observations and interactions can re-calibrate relationships to place. I will do this through examining my practice of Sounding, and the practice of Found Object performance to propose a large-scale compositional form of Assemblage.

Recording the environment

Recording place was one of the earliest uses of recording technology, through the areas of ethnomusicology, experimental music and composition. It allows us to have a sonic imprint of a time and place—often used for artistic means. When recording place for artistic means, the recordings can house knowledge not collected by any other researcher—weather patterns, flight paths, traffic conditions, noise pollution levels, migration patterns, conversation topics etc. A review of Annea Lockwood's, *A Sound Map of the Housatonic River* (2010) states:

"The recording unfolds in settings and chapters, the aquatic equivalent of a Bond film. This album doesn't just sound like a river; it sounds like a river going somewhere,

which of course it is. Along the way the protagonist—the Housatonic—experiences roaring adventures and peaceful interludes, rising tensions and hidden turns. Guest stars appear without warning: a train, a frog, a group of tourists. But nothing stops this river from its single-minded quest to reach the sea." (Richard Allen, acloserlisten.com, Feb. 2013)

This sonic mapping of place has taken place in many composers work from Francisco Lopez, *La Selva* (1997) immersion into the rainforest in Costa Rica, to Lawrence English, *The Peregrine* (2013)—recording of wind made in the Antarctic made during blizzards. Leah Barclay's work in *River Listening* has used the recording technology to take us beyond what we can hear. Using hydrophones to listen underwater has brought us in to the incredible sonic world of whales and dolphins in the marine environment, but her recordings and compositions based around the less understood freshwater aquatic environments transform perceptions of the previously unheard. Listening beyond what we can see (a great Oliveros provocation) is ever present in this work. The visually murky waters of Australian rivers are revealed to be full of sonic activity, with dawn and dusk choruses, neatly organised frequency bands of communicating species, and a helpful link to the scientific world in being able to listen to these recordings to understand health of the systems. It is akin to hearing birdsong and insects for the first time, and provides both artistic and scientific engagement.

Listening to the environment

There has long been a poetic vision of the artist in nature, using place as inspiration for composition. Throughout Western Classical music history composers such as Mahler, Debussy, Messiaen and Sculthorpe to name just a few, have written about place impacting their composition style. It involves the idea of deep listening, embodied experience, listening through time, and becoming attentive to sonic changes through seasons, temperatures, topographies, and geologies. It is about using listening in place as the site of learning; changing time scales, playing with foreground and background, listening in to the known and the unknown.

Soundwalks, all individually composed happenings in place, are completely engaged with listening to the environment. But so too are composers who use a morning walk as preparation and inspiration *for* work—being affected by place. Listening-in closely to the environment, as in the detailed work of Hollis Taylor listening to different families of butcher birds across the Australian continent, also fits in to this category. Her work, listening, transcribing and then composing with the material contains direct markers of cultural and environmental conditions at particular junctures in time.

Performing in and with the environment

Playing music in any environment reveals detailed information about place, space and time, whether it represents the Theatre of Listening, Museum of Listening or the City of Listening. When we go beyond the built environment into the outdoors this effect is heightened, drawing attention to particularities unique to the site inclusive of resonance, ambience, and climate. Regardless of the musical output, the result is always a dynamic experimental process. The environment is an active participant in sound-making, being listened to and itself listening.

When performing in and with the environment, it is the composer or the improviser asking the question of place. In the case of Alvin Lucier's *I am Sitting in a Room*, this is an active research question—what happens when I do this task repeatedly, in this space. In the case of Jim Denley in *Through Fire, Crevice and the Hidden Valley* (2007) he is performing with the environment, listening as much as playing, tuning in to his place through improvisation.

Erik Griswold's *Sounding Wivenhoe* takes 20 musicians out on to the cracked banks of Lake Wivenhoe at the height of the 2007 South-East Queensland drought. As the major water source for the city of Brisbane, the impetus for the work was to better understand the multi-sensorial nature of water loss. And playing in the actual dam, well below the tree line, with musicians up to hundreds of meters away from each other and the audience navigating the dry space between, this place and the recording became a sonic marker of waterlessness (Griswold 2007).

Other key works that have exploited the site-specific nature of performance include *Inuksuit* (John Luther Adams 2009) for classically-trained percussionists in place, and *Helicopter String Quartet* (Stockhausen 1992/3). These examples highlight the trend



Sounding Wivenhoe by Erik Griswold. Photo by Sharka Bosakova.

to expand our notion of where art happens, (Small 1998) opening up possibilities for repurposing places, reinterpreting relationships, and rethinking the place of culture in our daily lives.

This category of sonic and compositional exploration is also inclusive of interspecies improvisation, adding sound in to the environment, performing with the environment.

Constructing an environment

Constructing an environment in which listening can occur incorporates anything from a purpose built concert hall, to a bespoke, unique situation designed for sound making and listening. It could be at once a sound installation, a physical object to be entered into, or a physical object to be listened in to. The amazing Phillips Pavilion from the world expo 1958 designed by Le Corbusier and Xenakis, and sonically explored by Varese is one such example.

So too is Kumi Kato's *Suikinkitsu*, in the Roma Street Parklands (2009). This Sound Garden is designed with a water harp, *sui-kin-kitsu*, as a central feature. *Sui-kin-kitsu*, written as 水sui (water) 琴kin (harp) 窟kitsu (cave), is an inverted terracotta pot (40 to 60cm in depth) buried underground with a small hole at the top (3cm in diameter) through which water drips. It is devised so that water pools about 10cm at the bottom, leaving the rest empty. Slow dripping water splashes in the water pool and rings, creating a harp-like sound, hence the name *suikinkitsu*. This instrument sits in the middle of a park near a busy railway station in central Brisbane. Its sonic access is via a hollow bamboo pole, providing private access in to a sounding world.

Other site-specific environments include Graeme Leak's *Musical Fence in Winton*, Blue Bottle Design's *Quartethaus* (2011) originally constructed for the Melbourne Festival, and *The Piano Mill* (Wolfe & Griswold, 2016).

Harnessing the environment to make sound

Using the environment itself as the sound-making force has many natural derivations with wind tunnels, blow holes, not to mention the clapping tree in Western Queensland. Numerous artists have taken advantage of natural forces to produce mostly installation works. Alan Lamb's *Wire Music* records Aeolian sound generated by long telegraph wires, sometimes with live performing playing along live, and other times with performers added in during the mixing process. Ros Bandt's *Aeolian Harps* used in the installation work *Mungo*, on the dried lake bed of Lake Mungo, where desert sands sound the harp into action as it intertwines with dreams and stories that are tens of thousands of years old. This cycle of listening draws on the sharings of Mutti Mutti elder Alice Kelly. Also drawing on wind power are some of the work of Cameron Robbins exhibited at the Museum of Old and New Art in Hobart, Tasmania. The *Wind Section—Instrumental* is a wind powered drawing instrument, that when amplified becomes a kind of musical instrument as well. Using the power of the easterlies that race up the Derwent river, the intensity transformed the drawing speed and design.

Using Environmental Data to Make Composition

Sonifying data is a useful and interesting way of grasping the otherwise unknowable. Translating information from one form to a sounding state giving us the option to hear compositions based on the stock market crash, transformations in ice, GDP or data sets from NASA. The field of ecoacoustics uses this methodology as a primary tool for listening in to large data sets—being able to track absence and presence of species or to hear trends in the sounding world. Translating bat calls into human range gives us access to what was previously unheard—similar to the work of Barclay and Linke in their River Listening project.

In the Australian context, Jesse Budel used data sonification to hear changing weather patterns in a ghost town over a one hundred year period. The audibility of weather patterns provided a subtext for other compositional methods in the piece, allowing different readings and layerings of information.

These 6 categories have been separated out to help articulate different approaches, but in reality many projects use two or more approaches in the same work. Even many of the projects used above as exemplars actually intersect with multiple categories of compositional approaches to using the environment, taking place in an environment, or being inspired by the environment. Part 3 will chart some of my own projects that work within the musicalisation of the typology of listening, consider changing relationships to the drone, intentional sound and unintentional sound, and interact with the 6 categories of composing with the environment.

PART 3

Much of my recent creative work consists of large scale site-specific performance events housing a wide variety of sonic material convened together through attitudinal approaches like proximity, intimacy, density, intersections, shape, and emergence to name a few. These works tend to employ materials at hand including people, sounds, spaces and places. Drawing on a huge body of historical work—much of it mentioned already in this article—these creative works assemble sounding events to co-exist with various sites. Examples of this recent work include:

The Sound of 84 Pianos (Griswold & Tomlinson, 2017) which employs mobility ideas from the Museum of Listening; making music in a site, and blurring foreground/background/drone. It is based on my concept and artistic direction, and a commissioned composition by Griswold. The work itself presents 84 pianos simultaneously working through a 30 minute score in a non-aligned fashion, with



Vibrations in a Landscape from Easter at the Piano Mill 2017. Photo by Tangible Media.

the audience wandering the corridors listening to the combinations of pianos, pianists, acoustics and proximities of the sound. [WATCH VIDEO: <http://www.100waystolisten.com/84-pianos.html>]

Vibrations in an Architecture (Griswold, Tomlinson, 2016) was made for the Queensland Conservatorium foyer, performed by 20 percussionists playing instruments, moving fabric, and activating ropes. This 20 minute work moves between the modes of listening presented in the Museum of Listening and Theatre of Listening, again making site-specific music that exposing architectural particularities in a surround sound presentation, with clearly foregrounded material to be listened to, but without the ability to shut out intruding sounds. [WATCH VIDEO: <https://vimeo.com/175329522>]

Vibrations in a Landscape (Griswold, Tomlinson 2017) while similar in name, and employing similar compositional material, places the work in a different mode of listening—the City of Listening. It is specifically re-composed for an outdoor site in the bush, that allows for interaction with the already-sounding site as part of the listening experience. It blurs the boundaries between intentional and unintentional sound and moves the drone of wind and motorbikes revving from background sounds to intentional sounds. This work was specifically composed for the house site at the top of a huge valley at the Piano Mill site. It was re-composed again for the oval in the town of Tyalgum for the Tyalgum Music Festival 2017. [WATCH VIDEO: <https://www.youtube.com/watch?v=Q-CG2iLtfQc>]

Lastly *Clocked Out and Simone DeHaan* (DeHaan, Griswold, Tomlinson, 2017) clearly employed the Museum of Listening. Set again in the Conservatorium Foyer the audience were free to wander around at will, and the performers too appeared in different parts and different levels of the space. This work was site-specific, but provided very clear listening material in the form of 8 smaller compositional and improvisational pieces. It featured the forces of trombone soloist and trombone choir, harp soloist (Anne LeBaron), prepared piano, percussion soloist and percussion ensemble, plus music boxes being played in to peoples ears (Tomlinson, 2017) and a choir of bowed cymbals (Tomlinson 2017). [WATCH VIDEO: <https://www.youtube.com/watch?v=g3cbvv8Q2so>]

My role in these works is fundamentally as a collaborative composer, but in the act of making it becomes as much the role of a

choreographic director, making work on bodies, designing physical as well as sonic shapes, collecting and assembling from what I have at hand. It is intrinsically an adaptive and flexible compositional process which takes advantage of my skill base as an improviser, interpreter, composer, artistic director and curator. It also takes into account familiarity with place, usually built over a long period of time until I can incorporate the sounding environment into my temporal design process.

Soundings is a term I coined to define this activation of a place or space by a musician that is both investigative—information seeking—and performative. The first Sounding was by Erik Griswold, examining drought through a sounding on the dry, cracked banks of Lake Wivenhoe—the main water source for Brisbane. In this instance sounding had the dual meaning of making sound, and depth of water, with all sonic material being derived from the hydrologists data about the dam. The second sounding, *Sounding the Condamine*, was again site specific—on the banks of the Dogwood Creek near the town of Condamine—examining the colonial droving history of western Queensland through the Condamine Bell. This bell, a cowbell, was used in the pre-fence droving days to help drovers navigate and locate their stock while moving them through the harsh weather patterns of flood and drought. *Sounding the Condamine* brought together 400 farmers, community members, listeners, and artists to create an event exploring one particular theme from a multitude of perspectives. [WATCH VIDEO: https://www.youtube.com/watch?v=O_mssYWuCYy] More recent Soundings have been more singular in nature. Bloom Collective, investigating the process of gullying at a property in the Darling Downs while Artists-in-Residence at the EcoScience Precinct, Brisbane used sounding as a methodology for learning about place. [WATCH VIDEO: <https://www.youtube.com/watch?v=8sWNgJja5u0>] Clocked Out Duo, while on an artist retreat as part of 2019 *Because of her we can* Naidoc Week celebrations out at the 22 mile near Mitchell also used Sounding as a way to get to know place [WATCH VIDEO: <https://www.youtube.com/watch?v=UvcpAzr71-I>]. Based around The Piano Mill property in the granite belt of Southern Queensland, these soundings are exploring the acoustics of place—resonance, absorption, inter-species dialogue, weather patterns, and topographical

Sounding the Condamine on the Banks of the Dogwood Creek, 2008.
Photo by Sharka Bosakova.



patterns—through semi-composed performances.

In all these Soundings there is a desire to understand and learn about place. It is an assemblage of local knowledge, indigenous knowledge, scientific knowledge, experiential knowledge, all drawn together into a moment shared between creator, performers, listeners, to essentially change awareness and attentiveness to place.

Two ongoing site-specific projects that exemplify issues discussed thus far in this article are The Piano Mill and The Listening Museum, both exploring different aspects of site, environment, approaches to listening and acceptance of the soundscape. One is in a bush setting, in a purpose-made building, the other in an industrial factory—still in use. What they both have in common is the desire to give mobility in the listening experience, to work with instruments, people and place and to expand creative ideas through experimentation. Ideally these projects will lead to new ways of interacting with sound, and potentially new relationships to place. The mobility of the listener seems to have a deep effect on the experience of listening—choosing what to listen to, where to listen from, and experiencing sound as something to be explored rather than simply received.

Easter at The Piano Mill 2016, 2017, 2018 (Tomlinson, Wolfe, Wolfe, Griswold)

The Piano Mill is a site-specific construction high up in the granite-belt on the NSW/QLD border in Australia. It was designed by architect Bruce Wolfe as an instrument that houses 16 pianos, manually operated by 16 pianists, and listened to from outside the building. Composer Erik Griswold was closely involved in the development of the building and composed the first work for the Mill—an hour-long composition *All's Grist That Came to the Mill*. Tomlinson was the musical director of the premiere performance, and musicologist Jocelyn Wolfe collected the pianos and re-constructed each piano's individual history. This is a building constructed in the environment. But in the book *The Piano Mill* (2018) Griswold talks about his compositional process, based on years of listening in place—learning to hear weather patterns, the pacing of birdsong, the time of day. These elements, listening to the environment, are deeply embedded in this composition, in this building, in this place. In learning the performance practice of how to play “in the Mill”

pianists themselves had to specifically learn how to interact with the avian life, “as the musicians themselves were high up in the canopy as if in a bird hide” (Tomlinson 2017). They had to first learn to listen in place, to be able to play in place, and more importantly play with place. Lastly, Griswold discusses in his article about compositional process (Griswold 2018) using recording of place as a vital compositional tool. [WATCH VIDEO: <https://www.youtube.com/watch?v=HeUiq8grGsk>]

The Listening Museum 2013, 2016, 2018 Tomlinson

The process of making the Listening Museum is well documented in the article *The Museum of Listening* (Tomlinson 2016). Set up as an experimental site to intentionally disrupt notions of durational compositions by setting them amongst installations and disturbing them with spontaneous happenings, The Listening Museum interrogates the Museum of Listening – <https://www.clockedout.org/the-listening-museum>. In this case the environment, of the threshold entered into, was the working factory of UAP, complete with lathes, a foundry, mold-making machines, cutting machines, grinders, blow torches among many others. Functionality was mixed in with non-function, the intentional with the unintentional, pre-determined with spontaneous. What results is a listening experience where each individual audience member, over the course of 2 hours, navigates their own personal journey through the sounding material. In a space of over 200 square meters, there were sound events with only one audience member, and there were others where the entire audience was aware of collective, loud provocations.

The Listening Museum is itself a meta-composition, made up of many component parts, constructed in a modular time-based map. The 2018 version featured *Powertools and Drummers*, a conducted work for 4 factory workers and 3 drummers, 10 sound installations, a piano playing robot, a metal pour and 8 performances. No individual experienced all the works, but all had unique stories to tell about their experience of the event. It is this choose-your-own-adventure that is inspired by ideas of the Museum of Listening. [WATCH VIDEO: <https://www.youtube.com/watch?v=rKigeVdm6GU>]

This article has proposed a musicalisation of the terminology



The Listening Museum, UAP Factory, Brisbane, 2013. Photo by Sean Young.

The Theatre of Listening, The Museum of Listening and The City of Listening and tracked the application of these terms in various sound projects. In addition, the awareness of intentional sounds, unintentional sounds and drones allows us to transform sonic components from one category to another, by prioritising different sounds. Categorising the ways in which the environment is used in composition starts to illuminate just how broad this field is, and how interconnected sound and place have in fact always been. The apparent increase in this activity in the twenty-first century is most likely due to the increased urgency in our awareness of climate change. But it also demonstrates that the singularly interaction and relationship of audience seated hearing a performance on a stage, in a purpose built concert hall, is only one of many potentials for sharing sound. This transformation marks huge change that can assist in democratising access to sound events, change the value system of the arts, and make accessible through different presentation methods so many more sonic ideas. If sound can activate compassion and awaken our sense of custodianship of land, then music is well placed to be a central creative voice in our future.

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The Sound of Place: Environmental Artworks at Bundanon

by Nigel Helyer and John Potts

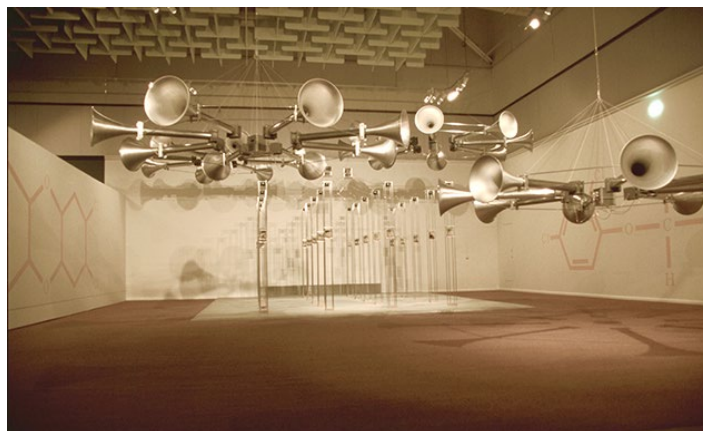
This essay listens to the sound of place: of Bundanon, a three thousand acre property in the Shoalhaven river valley in rural NSW, Australia. Bundanon is today an artists' colony and education centre, following the gift to the Australian people in 1993 of the entire property—including homestead, artist studio and extensive collection of art works—by its previous owner, the Modernist painter Arthur Boyd. Every year, 300 artists take advantage of the artist residency program, living in rustic isolation at Bundanon while working on art projects in all forms and media. This essay considers four artworks made at Bundanon by the artist Nigel Helyer: *Milk and Honey*, *Biopod* versions 1 and 2, and *Heavy Metal*. Each of these installation works was first exhibited onsite at Bundanon, before their inclusion in an exhibition in 2017 entitled *Landscape/Portrait: An exploration of the Shoalhaven River Valley*.¹ Each work has an audio component; the essay focuses on the role of sound in evoking aspects of place in these artworks.

The four artworks were created as part of a three-year Australian Research Council (ARC) Linkage Grant project, *When Science Meets Art: an environmental portrait of the Shoalhaven River Valley*.² The overall aim of the project is to create a complete environmental portrait of the Bundanon region, using techniques of environmental science, artistic practice, information technology, media technology and cultural history. Science meets art in the fusion of data—collected by environmental scientists—with the communication of this information through artworks and media technology. Each of the artworks conveys part of the greater environmental portrait of Bundanon undertaken by the research project.

The research process involves the analysis of soil and river water quality by a team led by environmental scientist Mark Taylor. The paints used by Arthur Boyd in his former studio have also been subjected to mineral analysis; sonification of this data is incorporated into the work *Heavy Metal*. The data representing environmental quality is digitally transformed into sound and visual information in numerous artworks. The environmental portrait of Bundanon also incorporates the social and cultural history of the region, as it pertains to its environmental condition. Social history is included in the project as it embodies the environmental shaping of the region.

The Bundanon region is the site of our environmental portrait because of its distinctive natural and cultural character. The 3000 acres have been overseen by the Bundanon Trust since 1993. The vast property, including a winding section of the Shoalhaven River, incorporates eleven different vegetation communities, an abundance of flora as well as native wildlife. The landscape is central to the Trust's activities, which include replanting of native vegetation, and the removal of exotic weed species from the riverbanks.

The four artworks considered in this essay all probe the question: What is it to know a place, and how is it that we know? Do we slowly accumulate intimate details gathered during repeated visits to a familiar terrain, or are we perhaps transfixed and transformed in an encounter with a solitary natural phenomenon? Does our knowledge of the place's history condition our experience of that place in the present? Does imagination colour our perception of place? We have contributed to the Bundanon Trust's annual Siteworks festival



Nigel Helyer, *Silent Forest* (1996), National Gallery of Victoria.

as a means of manifesting our reflections upon and relationships to the landscape. We hope to act not as distant and impartial observers but embodied within the terrain, moving through it, working with it. The greater research project addresses the issue of how an environmental portrait might be conceived, and what constitutes a landscape. The approach is to think about landscape as an amalgam of lives, cultures, histories, sounds, biologies and economies; never the one thing, always a jostling of the many; the different and incommensurate; some obvious voices, some quiet and hidden. The sounds of nature, and of cultural history, are invoked within the multi-voiced environmental portrait of Bundanon.

An environmental history of Bundanon

One of the fascinating aspects of Bundanon is that the region's social and cultural history has left an imprint on the landscape. The Indigenous people whose traditional country encompassed the contemporary Bundanon Trust properties were part of the Yuin group, with close ties to the Wodi Wodi people to the north. An Indigenous Cultural Heritage Plan commissioned by Bundanon Trust in 2011 found only two sets of axe-grinding grooves and possible stone tools in the region. The scant traces of habitation suggest that the lower Shoalhaven was an area moved through rather than settled, with the river an important means of travel by canoe. Extended family groups moved through their country responding to seasonal availability of resources, managing country by fire. These groups came together with others for ceremonies or activities such as kangaroo drives or burning country.³

European occupation brought a radical transformation of the landscape, through tree-felling and then clearing for agriculture. Cedar-cutters felled valuable red cedar trees (cedar was reportedly Australia's first export) from 1811; in 1812 there were nine ships transporting cedar back to Sydney. The clearing of the forest removed the site of traditional Indigenous life, and opened the land for agriculture. 600 acres of land were sold to R. H. Browne in 1832, on the condition that '55 acres were to be cleared and cultivated and fences erected.'⁴ This and other adjoining properties were bought by Dr. Kenneth McKenzie in 1838; the McKenzie family endured severe periodic flooding of the Shoalhaven River to establish their farm and

farm buildings. The destructive flood of 1860, which wiped away buildings along the river, prompted McKenzie's building in 1866 of the two-storey homestead, built of sandstone and local cedar, along Georgian lines and on high ground: this house today is open to the public as the former house of Arthur Boyd.

The McKenzie agricultural estate of Bundanon focused on dairy farming and maize crops; access to Nowra was by river ferry. Other farmers cleared and cultivated land in adjoining areas, among them the Biddulph brothers, who owned Earie Park. The Biddulph diaries are used as a source by Nigel Helyer in his work *Milk and Honey* (2013), originally installed in the Bundanon homestead; these diaries display a farmer's sensitivity to the weather, the productivity of the land, and a watchful eye on the river (there were disastrous floods in 1870, 1891 and 1898). By the early twentieth century, the Bundanon homestead was the central building of a working farm that included stables, a curing shed, orchard, vegetable garden, pigpens, dairy, beehives, as well as workers' huts.

The McKenzie family left Bundanon in 1926, following a tragic double drowning in the river. The property was leased to tenant farmers for half a century, running dairy and beef cattle. The next major transformation of the Bundanon landscape occurred in 1968, when the property was sold to art historian Sandra McGrath, her husband Tony, and art dealer Frank McDonald. Most of the working farm buildings were removed, trees planted, and an English-style cottage garden installed. A magazine article in the 1970s, entitled 'The Happy Valley,' commented that 'a Sydney art dealer has built a mid-nineteenth century landscape on a grand scale.'⁵ Bundanon was now less a working farm than an artists' community; it was this environment that Arthur Boyd visited in 1971. He was so captivated by the landscape that he bought the nearby property Riversdale in 1974, then Bundanon itself in 1979. Boyd built his studio at the rear of the homestead in 1981 (the studio was the initial site of *Heavy Metal* in 2016).

During his tenure at Bundanon, Arthur Boyd fought to preserve the environment from development and damaging activities such as sandmining. He was quoted many times in his belief that "you can't own a landscape". He realised his vision of protecting the natural and cultural heritage of Bundanon when the Commonwealth accepted Bundanon as a gift in 1993, establishing the Bundanon Trust. Boyd saw Bundanon as "a place for the community to enjoy the bush and the river, and a place to be used as a forum where those from every facet of the arts and science could get together". Collaboration and interaction were essential: "I like the idea of people talking to one another," he stated.⁶ These four artworks, with their collaboration between art and science, and focus on the landscape and environment of Bundanon, develop the spirit of creative inquiry advocated by Arthur Boyd.

Hearing Place

The distinction between place and space has been made in a number of disciplines since the 1970s. Place is understood as the subjective rendering of space, the personal appreciation of a section of space or territory. The architect and theorist Colin Ripley has remarked that place emerged in architectural thought in the late 1960s as an "antidote" to the modernist conception of space. The "homogeneous and abstract built world" constructed by modernist architecture began to appear disenchanted and "devoid of poetry" to many architects in the 1970s. A more sensitive architectural practice valued place over abstract space, enabling a "poetical dwelling" as well as greater harmony with the environment.⁷ Place was further emphasised in human geography in Yi-fu Tuan's book *Space and Place: The Perspective of Experience* (1977): Tuan focused on the significance of human experience in constructing and defining places.⁸

Theorists of sound art and acoustic ecology have been particularly attuned to the function of sound in evoking place. Because sound fills space, it is strikingly effective in conjuring the experience of place or "soundscape", as sound artist R. Murray Schafer articulated in his highly influential 1977 book *The Tuning of the World*.⁹ Generations of artists working with sound have evoked place using recording technology; this evocation may take the form of a recreation of sounds within a specific space, or a creative response to the sonic profile of a particular environment. As the sound artist Ros Bandt has observed: "place is constructed, remembered, embodied, restored and re-created through certain aural signatures that enable us to interact with that place in new ways."¹⁰ The 2007 anthology *Hearing Places*, co-edited by Bandt, offered thirty-four perspectives on the general theme of localised sound: the way "hearing place" is understood and interpreted. This may refer to a specific location or "sonic habitat", or to an artistic response to an acoustic environment, using recording technology or invented sound work. The ethical dimension of experiencing place through sound is frequently emphasised in critical writing on acoustic ecology and sound art. Attentiveness to the sounds of the other or of the past is invoked as the basis of cultural and political dialogue.¹¹

Recent theorising of place has emphasised the complexity of the personal rendering of space, incorporating memory and history of place. Lucy Lippard's book *The Lure of the Local* defined a city as "a layered location replete with human histories and memories."¹² Rebecca Solnit's *Infinite City: A San Francisco Atlas* proposed an infinite number of subjective maps of a city, comprising the personal experiences of all those who traverse the city's space. For Solnit, "every place is if not infinite then practically inexhaustible."¹³ This complexity of time and space pertains to rural environments as well as urban spaces: every place has a history which shapes our appreciation of the place in the present.

There is a strong, but largely unacknowledged, relationship between sound, site and memory, both personal and cultural, that allows us to form complex associations and communal identities with particular loci. John Potts has described the sound of place evoked by two recent sound-art works, both exhibited at Documenta (13), 2012, in Kassel, Germany. *FOREST (for a thousand years)* by Janet Cardiff and George Bures Miller pursued the idea of emplacement through the medium of sound. This audio installation within a densely wooded park created a spherical sound field with 30 loudspeakers, which played voices and sound recordings evoking different periods of time. The audience had the sense of "experiencing the passing of a millennium from the perspective of this one patch of territory in the park...the artists in this work complicated the experience of place by invoking the passing of time."¹⁴ At the same Documenta, Susan Philipsz achieved a similar feat of inscribing a specific place in Kassel with layers of time evoked by sound. The timescale, 1941–1944, was much briefer; the site was Kassel's former Hauptbahnhof, still in marginal use. Seven loudspeakers above the train platform played *Study for Strings* (1943) by the Jewish composer Pavel Haas, who died in Auschwitz in 1944, after being deported by train from this very platform. The effect of this work was of "the past speaking to the present at this haunted place" as the music drifted in to the platform as if from the past. Listeners were affected by the melancholy weight of the past, their experience displaced "through the intersection of place with the plane of time."¹⁵

Recent sound works by Nigel Helyer have incorporated a historical dimension in creating an audio portrait of a specific place. John Potts has called these works, such as *Silent Forest* (1996) and *The Wireless House* (2009), "multi-faceted sounding-boards of history and culture."¹⁶ The original "wireless house" was built in 1934 in a park in inner-city Sydney, with the aim of providing radio broadcasts for the poor during the Depression. Helyer's work re-sounded



Nigel Helyer, *Milk and Honey* (2013). Bundanon homestead.

this long-forgotten site with contemporary audio technology: the re-constructed site detects visitors and plays audio sequences from its archive, as if quietly announcing its memories to visitors. Other recent works—*Ecolocated* (2011) and *VoxAura, The River Sings* (2011)—create a “sonic cartography” in evoking specific places, with an environmental emphasis. The audio of *Ecolocated* blended

location-sensitive sounds, sonification of water quality data, and oral history material into “a multi-layered composition that rendered densely intertwined sonic narratives of and by the place: Belfast.”¹⁷ *VoxAura* focused on maritime life and marine ecology at the port city of Turku, Finland. Two ships’ lifeboats were moored either side of a pedestrian bridge over the River Aura in the centre of town;

one lifeboat played audio including local narratives and music, while the other played sonification of local water quality data. The work asks the audience to reflect upon the river—and the Baltic Sea—in an environmental context, to appreciate its “vital role as a chemical interface that controls our climate and our atmosphere.”¹⁸

The four works discussed below use similar methods, incorporating environmental data, historical material, and environmental sound recordings, to evoke a specific place: Bundanon.

Milk and Honey

Milk and Honey (2013), was an eight-channel sound-sculpture installed in the music room of the old Bundanon homestead. As if stranded by an ancient flood, two sonic punts “floated” in the Bundanon homestead, carrying cargoes of milk and honey, sounding out their riverine environment with fragmentary voices in a strange new world.

Milk and Honey invoked the voices and atmospheres, the actions and beliefs of generations of Bundanon settler inhabitants as they struggled to eke out a living in these strange surroundings. “A land flowing with milk and honey” is the biblical phrase that describes the agricultural plenty of the chosen land. Early colonial settlers to the Shoalhaven region forged their own path toward realising this metaphor in a life that melded European practices and stereotypes with an unknown, even unknowable, landscape.

The audio of this work comprises sounds of farm life, and a mingling of Old Testament voices with the prosaic and terse entries from the Biddulph farm diaries of the 1880s. Extracts from these diaries summon a life of constant physical action and interaction; a life in which the ebbs and flows of the river provide both a daily pulse and a lifeline to the outside world; a life where the constant routines of farming were interrupted and supplemented by the more ancient rhythm of hunting and foraging in the bush:

Shipped 22 bags of corn on punt
Picked preserving dish full of grapes to make jam
Got a small swarm of bees, mother practiced her hymns
Mother had a yarn with Hugh at Cowtails.¹⁹

In the *Milk and Honey* soundscape, oars and seats of the punts emit voicings of segments of the diaries. The piano plays farm sound-fragments including the buzzing of bees; the slapping of oars against the water as the punt transports people and things to and from the farm on the fast-flowing river; the squirt of fresh cow’s milk onto the side of galvanised buckets; and segments of a concert played on the Steinway piano by a family member, who stays at the homestead from time to time.

As in previous Helyer installations, the work has a “visceral” quality derived from the audio technology. The sound-sculpture does not employ normal speakers but a series of eight “audio actuators” that transform the sculptural objects (the punts, the bee hives and oars) into sounding objects that literally vibrate. The many audio sources in the work—historical, biblical, ambient environmental and those referencing Boyd—form a fragmentary, multi-vocal attempt to portray the complexity of the lived landscape. Having eight sound channels allows the sounds to literally move around and through the various components of the sculptural work—which has at once a familiar but also an alien presence in the homestead.

smooth-flowing system. In her catalogue essay, Cecelia Cmielewski describes the “quality of reverie that the composition of sound and objects in *Milk and Honey* evokes”. The work asks us to compare the pace and rhythm of life then and now; the close proximity and forms of mobility and markets then and the ease and environmental havoc of the transport and dispersal of produce now. *Milk and Honey* is also “a deeply political query into the rapid shift that has happened in the short time of farming at Bundanon.” It provides a space for contemplation that can “lead to an enquiry into the ways in which land management shapes the environment and those who live in it and benefit from it.”²⁰

BioPod_V01

BioPod_V01 (2014) was a site-specific, micro-architectural sculpture designed to facilitate active listening in the natural environment. Positioned on the lake, a sonically significant site at the Bundanon property, a single-person capsule allowed for an overnight acoustic vigil. *BioPod_V01* combined sculptural, architectural and acoustic experiences that could create an extended narrative of aural experience. Participants were invited to make digital recordings of their sonic surroundings as well as their own voice as contributions to the ongoing sound archive—a type of ship’s log. *BioPod_V01* functioned as an escape pod, a re-entry capsule, an ark, in which an overnight acoustic reverie could be recorded on the pod’s user-friendly audio system.



Nigel Helyer, *BioPod_V01*. Lake at Bundanon.

For many, the combined sensations of camping alone in the (extremely vocal) Australian bush and floating in the middle of a lake in total darkness proved a severe challenge, but the temporary withdrawal from the *quotidien* permitted an acuity in listening, experience and thought: a brief period of transformation and identification with the environment.

The *BioPod_V01 Survival Guide* offered this advice for users:

Our species makes a lot of noise—we have created a world in which silence is a rare commodity. The *BioPod* invites you to spend an overnight acoustic vigil where you can maintain your silence and listen to the voices of other species.

During your overnight stay you are invited to make a series of short audio recordings of the soundscape and to also record a personal audio-log reflecting on your experience.²¹

BioPod_V01 was an immersive experience for the intrepid soloist. Cecelia Cmielewski, who experienced a night in the pod, describes the aftermath: a “deeper consideration of the biology of the lake” and the opening of a sonic world that “feels like prehistory.” The

[Link to Audio File 1: Audio, *Milk and Honey*](#)

Milk and Honey crosses time, re-creating a sense of the arduous repetition of farm life back then; the isolation both blissful and demanding. Working the punt required attention to the river and its conditions, but also provided timeout and a chance for reverie on the



Nigel Helyer, *BioPod_V02* (2015). Bundanon.

recordings she made of this acoustic environment included: kangaroos which “thump loudly as they come to and from the lake to drink; frogs are abundantly loud and varied; egrets and kookaburras swoop close by, wings touching the water; the smallest of insects are out and about. It is not peaceful; it is a rowdy, hectic cacophony and one not heard during the day, but only at night in places where people don’t often go.” The experience in the biopod slowly revealed “a complex world that cannot be seen, only heard.” It was the sound of Bundanon, at night, on the lake. The result was “a disarmingly humbling experience in which the human is completely disregarded and not required. For a moment, it is as if the Anthropocene had not begun.”²²

BioPod_V01 was a sound-work designed to “make itself”. Instead of controlling the audio content, Helyer’s aim was to establish a situation in which participants engaged with a natural soundscape (in a way that they would not normally experience). This allowed them to produce their own content/response, creating in the process a generative work.

[Link to Audio File 2: Audio, *BioPod_V01*](#)

BioPod_V02

BioPods_V02: the Nebuchadnezzar suite (2015) responded to the 2015 Siteworks thematic at Bundanon, *The Feral Amongst Us*. The suite of three biomorphic sculptures could be considered as ‘biology turned feral as sculpture’ or, conversely, ‘sculpture turned feral as biology’. Each structure contained a narrative of a feral or rewilded being. Each of the works was designed to be inhabited in a single mode—standing, sitting and lying down—and each form was equipped with a solar-powered audio resonator system that played

the narratives of the outcast King Nebuchadnezzar II. Moreover, visitors were required to crawl on all fours to enter the works, emulating the posture of the savage king.

The orientation and motivation of the work was drawn from a large series of Arthur Boyd paintings depicting Nebuchadnezzar, a Babylonian king of overarching military ambition, who, for a period of seven years, was outcast into the wilderness to live as an animal (or rewilded) as a form of rehabilitation and redemption. The Book of Daniel recounts how King Nebuchadnezzar was punished for his overbrimming, warlike ambitions by being exiled into the wilderness to live as a feral creature:

and he was driven from men, and did eat grass as oxen,
and his body was wet with the dew of heaven,
till his hairs were grown like eagles feathers,
and his nails like birds claws.²³

Possibly in homage to the iconic image by William Blake, Boyd painted Nebuchadnezzar in an almost obsessive manner over several years. He produced some seventy allegorical works featuring an outcast, tortured figure in a blazing Australian landscape: the human reduced to the subhuman, beyond society, alone.

The following are narrative extracts from the three sound sculptures—Helyer’s responses to Boyd’s images; a repertoire for exile:

The King stands in a burning desert weeping.
The King stands for his portrait.
The King stands and stares at the horizon.
The King stands and bows his head in sorrow.
The King stands but does not brush the flies from his face...

The King sits and birds peck at his head.

The King sits under a tree with melancholic thoughts.
 The King sits in judgment of emptiness.
 The King sits on a throne of dried grass.
 The King sits in his own excrement and is foul ...

The King lays staring at his claws.
 The King lays engulfed by his own stench.
 The King lays with aching bones.
 The King lays dreaming of a huge tree.
 The King lays dreaming of four monsters ...

These narratives, spoken by the artist, described the physical and emotional toll of Nebuchadnezzar after his fall from grace due to acts of tyranny and arrogance. The three audio sculptures, situated on a hill at Riversdale (part of the Bundanon Trust property), were feral in the most appealing way: they became playful objects for all ages. Children crawled, climbed and jumped from them; teenagers and younger adults enjoyed being safely enclosed in the vessels while drifting off or listening attentively. Older adults were absorbed by the meaning of the text and stood alongside, closely listening to the sound work. Many listeners had the experience of being isolated from the external world and immersed in the Nebuchadnezzar reveries. One surprising effect of the feral sound sculptures was that many people felt protected and/or invisible once ensconced in these quite visually transparent structures; it was as if the soundscape had enveloped them in an impenetrable mist.

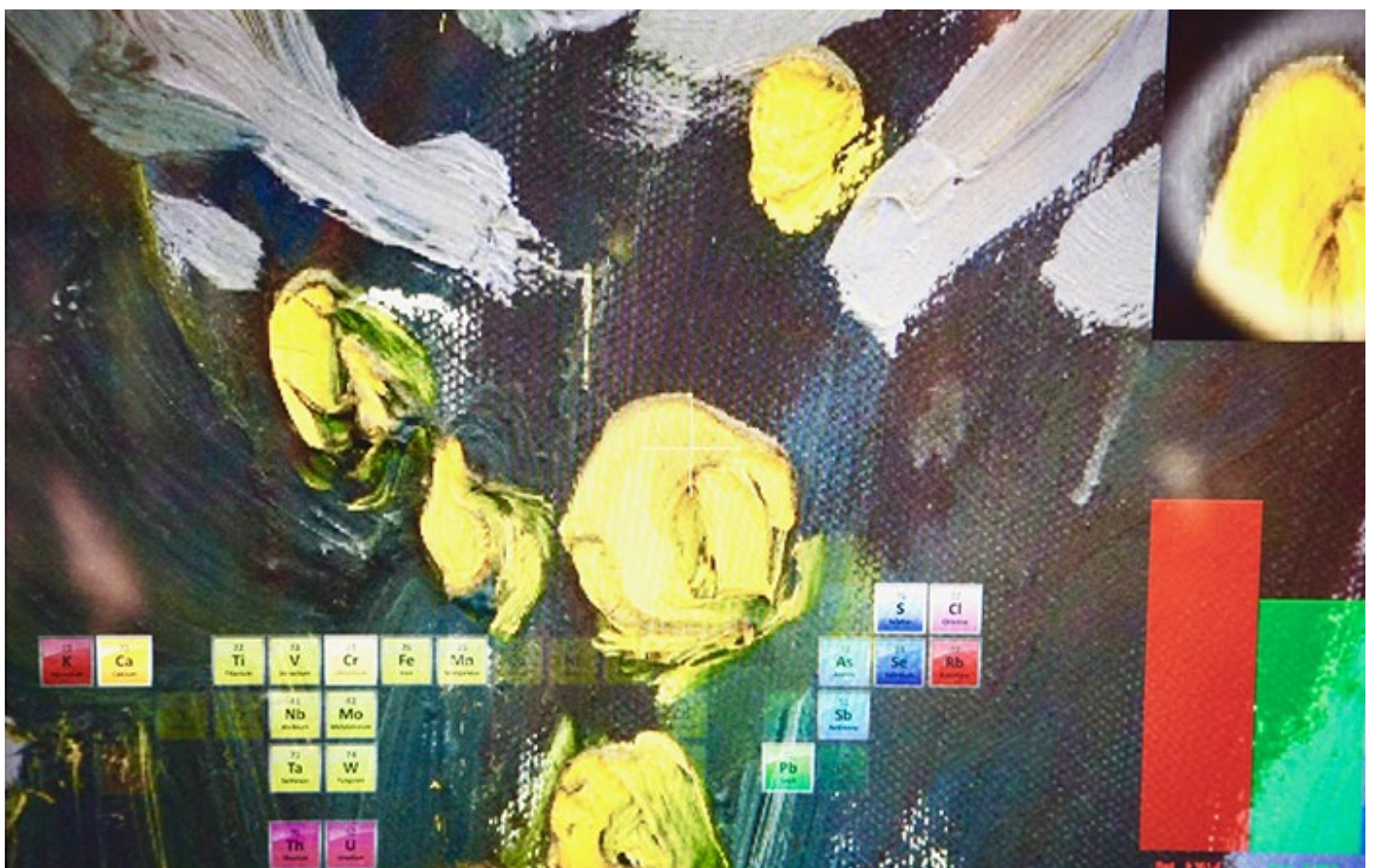
Heavy Metal

Heavy Metal (2016) provides the sound of a painting. Specifically, it was initially the sound of Arthur Boyd's *Return of the Prodigal Son* (c1997), left unfinished in his studio at Bundanon (Boyd died in 1999). To generate the data programmed into *Heavy Metal*, a handheld X-ray fluorescence spectrometer operated by environmental scientist Mark Taylor was directed at paints used in the painting. The starting premise of the work is that Arthur Boyd painted this (mineralised) landscape with colours that were themselves formulated from earthy compounds and exotic metals, milled to a fine paste in linseed oil and turpentine. *Heavy Metal* invites us to interact with one of Boyd's paintings to discover a hidden world of elements and minerals in an experience that is simultaneously chemical, visual and musical.

Helyer and Taylor analysed the mineral composition of the entire colour range used by Boyd, developing a huge database of minerals that corresponded to his palette. The spectrometer analysis of the paints used on the unfinished Boyd painting revealed that the paints contained up to 35% cadmium and 60% lead. Because Boyd frequently painted with his fingers, preferring to feel the metal-rich paints with his hands rather than use a brush, he may have inadvertently contaminated himself in the process of painting.

The second stage in the creation of *Heavy Metal* was to sample the Steinway piano at the Bundanon homestead, note by note. Regular keystrokes were recorded, along with the reverberance of the sounding board resulting in one to two minute sound files per note. Working with another colleague, Jon Drummond, an expert in data sonification, Helyer created a computer-driven audio-visual system able to read the video stream from a camera facing Boyd's painting.

[Link to Audio File 3: Audio, BioPod_V02](#)



Nigel Helyer, *Heavy Metal* (2016). Artist studio, Bundanon.

The screen interface displays a highly magnified colour “target” area from the painting along with the RGB values and the predominant minerals present, which are shown as elements of the periodic table. The system then translates the stream of mineral data into sound, which is layered in two components: a generalised harmonic chord structure that corresponds to the colour, overlaid by individual note highlights that illustrate the distribution of the most prominent minerals. The computer monitor gives feedback on the area of interest, colour ratios and a graphical display of the minerals detected.

Heavy Metal is interactive at a complex and conceptual level. The composition of chord-like sounds is created by a real-time analysis of the minerals in the colours of the painting. As a video camera is trained onto a section of the canvas, the screen displays the mineral content of the selected colours, in the form of the periodic table. The image and corresponding sound change each time someone selects a new section of the canvas on which to train the camera. *Heavy Metal* also brings together two kinds of science: environmental and computational. The installation provides participants with different ways to animate a ‘static’ painting. The sound is dynamic, based on the elements used in a particular area of Boyd’s oil painting.

[Link to Audio File 4: Audio, *Heavy Metal*](#)

In designing the soundscape, Helyer and Drummond decided that as the installation would operate constantly, the audio should constitute a subtle, harmonic composition. While correctly representing the database, the audio would automatically re-write sequences of the selected notes, thus avoiding the ‘looping effect’ common in generative digital works. The soundscape operates like the ‘strange attractor’ phenomenon in Chaos Theory, in which iterations are similar but never identical.

Deborah Ely, Chief Executive Officer of Bundanon Trust, has remarked that in these four artworks, Nigel Helyer “has developed a language that engages visually and aurally with the physicality of the place”. This engagement is with both the “literal material” of Bundanon, and with the “ideas held within its histories and the artist’s imagination.”²⁴ The sounds of Bundanon are reinterpreted for us through these artworks, as is the presence of Arthur Boyd, and the wide landscape of his mind. The acoustic environment of Bundanon, recorded in *BioPod_V01*, mingles with Boyd’s imagination and with the history of the place, creating a portrait in sound of Bundanon.

Endnotes

1. *Milk and Honey* (2012) was an eight-channel sound-sculpture installed inside the homestead at Bundanon. *Biopod_V01* (2014) was a single-person capsule floating on the lake at Bundanon. *Biopod_V02* (2015) was a suite of three sculptures exhibited at Bundanon for the annual Siteworks festival. *Heavy Metal* (2016) was an interactive installation situated in the artist studio at Bundanon, opening at the 2016 Siteworks festival. *Heavy Metal* and *Biopod_V01*, along with documentation of *Milk and Honey* and *Biopod_V02*, were included in the exhibition *Nigel Helyer: Landscape/Portrait: An exploration of the Shoalhaven River Valley*, curated by Nigel Helyer and John Potts, Macquarie University Art Gallery, 1 March—13 April 2017.

2. This research project, based at Macquarie University, has as its personnel the researchers Professor John Potts, Adjunct Professor Nigel Helyer, Professor Mark Taylor (Macquarie University) and Professor Mark Evans (UTS). Industry partners for the ARC Linkage Grant project are Bundanon Trust and the Australia Council of the Arts.
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4. *Bundanon Conservation Heritage Plan, Vol 2*. (Bundanon: Bundanon Trust, 1997), 3–4.
5. *ibid*, p 20.
6. *Siteworks: Field Guide to Bundanon*. (Bundanon: Bundanon Trust, 2014), 236.
7. Colin Ripley, “Hearing Places: Sound in Architectural Thought and Practice”, in Bandt, Duffy and MacKinnon (eds), *Hearing Places: Sound, Place, Time and Culture*. (Newcastle, UK: Cambridge Scholars Publishing, 2007), 87. Ripley cites Christian Norberg-Schultz’s *Intentions in Architecture* (1968) as an early and influential study of architecture and place.
8. Yi-Fu Tuan, *Space and Place: The Perspective of Experience*. (Minneapolis: Minnesota Press, 1977).
9. R. Murray Schafer, *The Tuning of the World*. (New York: Alfred A. Knopf, 1977).
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11. “Listening and not listening have moral and ethical implications, not only for the voices that speak and are heard, but also for the ways in which voices constitute particular forms of power...”. *Ibid.*, 1.
12. Lucy Lippard, *The Lure of the Local: Senses of Place in a Multicentred Society*. (New York: New York Press, 1977).
13. Rebecca Solnit, *Infinite City: A San Francisco Atlas*. (Berkeley: University of California Press, 2010), 2.
14. John Potts, *The New Time and Space*. (Basingstoke: Palgrave Macmillan, 2015), 91.
15. *Ibid.*, 92.
16. Nigel Helyer and John Potts, “Ecolocated: Art, Science, Environment,” *Studies in Material Thinking* Vol. 8 2012 at <http://www.materialthinking.org/papers/94>. 6.
17. *Ibid.*, 4.
18. *Ibid.*, 5.
19. Thomas Tregenna Biddulph, diary extract, 1880s, archival material, Bundanon Trust.
20. Cecelia Cmielewski, “Edges, Proximity and the Creative Leap”, in *Nigel Helyer: Landscape/Portrait: An exploration of the Shoalhaven River Valley* catalogue (Macquarie University Art Gallery, 2017). 30.
21. Nigel Helyer, *BioPod_V01 Survival Manual*, 2014.
22. Cecelia Cmielewski, “Edges, Proximity and the Creative Leap”, 31.
23. Daniel 4:33.
24. Deborah Ely, “One World” in *Nigel Helyer: Landscape/Portrait: An exploration of the Shoalhaven River Valley* catalogue (Macquarie University Art Gallery, 2017). 37.

the global composition 2018

conference on sound, ecology, and media culture

Lectures | Discussions | Workshops | Concerts | Installations | Social Sculpture
 4–7 October 2018 | Media Campus Dieburg | Darmstadt University of Applied Sciences

As a follow-up of the successful **The Global Composition 2012**, the 2018 conference brought together around 100 scholars, scientist, designers, engineers, educators, artists, composers, and activists from all over the world, all selected by a double-blind peer-review process following a transdisciplinary open call.

Within the frame work of acoustic ecology, this year's symposium had its focus on media culture. It discussed innovative cultural, artistic and educational auditory practices in an age coined by worldwide migration, the societal requirement of diversity, and an enormous increase of new audio technologies and Augmented/Virtual Reality.

At the same time, **The Global Composition 2018 centered around the silver jubilee of the World Forum for Acoustic Ecology**, which was founded 25 years before in Banff/Canada, so that the Dieburg event also balanced and compared Soundscape Studies' achievements, its old and new perspectives.

In brief

- Major interdisciplinary conference on sound.
- Relaying scholarly, scientific and artistic research.
- More than 100 participants from around the globe.
- Keynote lectures & keynote workshops by renown researchers.
- Open call; selection process based on double-blind peer reviews by top-class committee members.
- Paper presentations, lecture performances, poster sessions and workshops.
- Concerts, performances, media installations and fixed media artworks.
- Published conference proceedings with full papers in print form (ca 500 pl).
- Full video-documentation of lectures, paper and poster sessions plus workshops and artistic works.
- Strong student involvement, especially from the Master's program International Media Cultural Work.
- Conference chair: Sabine Breitsameter/Professor for Sound and Media Culture, h_da.

Scientific, scholarly and artistic contributions

More than 150 submissions were reviewed by the committees, resulting in a conference program with a transdisciplinary variety of paper presentations as the core of the symposium. The carefully selected program of installations, performances, compositions, workshops and earplays added an array of creative as well as practice oriented positions.

Keynote lectures and keynote workshops

The symposium's keynote lectures investigated and discussed current and prototypical problems within the field of the auditory world, and suggested possible pathways to solutions:

- **Prof. Dr. Milena Droumeva** (Simon Fraser- Univ. Vancouver/Canada): Gendered Ecologies. Voice and the Game Soundscape.
- **Prof. Dr. Maria Klatte** (University of Kaiserslautern, Germany): Effects of Noise on Cognitive Performance in Children. Evidence from Laboratory and Field Studies.
- **Walter Tilgner** (Independent Artist, Allensbach, Germany): Recording European Biotopes. Listen to Nature!.

In keynote workshops the conference's overall topic was practiced by different approaches to listening and auditory awareness. The workshops were also open to the general public and took place in cooperation with Prof. Ulrike Pfeifer, Frankfurt UAS (Faculty of Social Work and Health) and within the academic network of the Hessische Film- und Medienakademie hFMA.

- **Prof. Dr. Ioanna Etmektoglou** (Ionian University, Corfu, Greece): "Cats don't just miaou!" Exploring Animal Sounds in Soundscape Improvisations. A Tool for Developing Environmental Awareness, Empathy and Aesthetic Sensitivity.
- **Prof. Eric Leonardson** (The School of the Art Institute of Chicago, USA): acoustic ecology and DIY Hacking Aesthetic. Accessible Technology and Embodied Listening.
- **Hildegard Westerkamp** (World Forum of acoustic ecology, Canada): Sustainable Soundwalking. Passing on and Relaying acoustic ecology's Core Practice.

Emerging focal points

Migration and diversity, virtual technologies and media aesthetic education emerged as the "red threads" throughout the conference. Numerous contributions reflected not merely the soundscapes of natural and urban environments, but discussed also soundscapes' social implications, e.g. experiences of women, queers, and migrants, such as in Amanda Gutierrez's highly acclaimed essay and audiovisual installation, "Walking in Lightness".

As one major topic, artistic contributions dealt with the tangible and simulative qualities of sound created by 3D audio technologies, and along the paradigm of soundscape: Pieces from accomplished artists like Barry Truax and Leah Barclay and by newcomers like Natascha Rehberg and Aleksandar Vojnovic were presented – created, displayed and discussed by and within the framework of Darmstadt UAS's Soundscape and Environmental Lab.

Media aesthetic education unfolded as a major and future topic, as its central goal is not merely to master the digital age's machines for utilitarian purposes, but its aesthetic-oriented exploration of the devices' characteristics and potentials for expression and creation.

Discourse

Daily plenary sessions complemented the ongoing discourse, starting with "Erratic Blocks", five-minute inserts, in which experts from other fields added to the Soundscape Studies's discourse from their point of view of their respective discipline.

A social sculpture

On the occasion of WFAE's 25th anniversary, a "social sculpture" was created by photos, program copies, compositions, recordings, reminiscences, writings, drawings, which participants who attended the founding event in Banff/Canada in 1993 were asked to bring in.

Documentation: Proceedings and videos

The published conference proceedings with full papers filled a book of around 500 pages.

A video-documentation on a youtube channel of each lecture, paper session and impressions of the workshops and events are complementing the documentation of the symposium.

Background

The interdisciplinary blend of intellectual analysis, practical design, engaged environmental, social and political work, as well as artistic production, is what constitutes the essence of Soundscape Studies and acoustic ecology. It has a close tradition related to media cultural concepts.

Media and its auditory, from analog audio media up to digital and interactive media and virtual reality, play a crucial role in almost any listening practice and methodology. Based on R. Murray Schafer's seminal publication „The Tuning of the World“ (1977) which unfolds a cultural history of listening, the conference addressed especially the relationship between listening and media.

In the center stood the debate of the main thesis, that the importance a society assigns to the realm of the auditory correlates with the qualities of its sonic environment including its audio media, signifying the overall attention a community pays to the auditory and its cultivation.

Acoustic ecology is a prototypical example for aesthetic education, issuing directly into the desideratum of media aesthetic education in the digital age.

Organization

The Global Composition 2018 conference was organized by Hochschule Darmstadt's Research Center for Digital Communication and Media Innovation (DKMI) in collaboration with GFTN e.V./Darmstadt, the h_da's Soundscape & Environmental Media Lab/Master's program International Media Cultural Work (Faculty of Media), and the World Forum for Acoustic Ecology.

Organisational Committee

- Carolina Alarcón
- Cansu Karakiz
- Valentina Petermann
- Natascha Rehberg
- Aleksandar Vojnovic
- Robin Wiemann

Student Volunteers

Sabine Abi-Saber, Diego Arandia, Hayley Durham, Moritz Fischer, Nina Hassinger, Ayesha Jawaid, Xenia Kitaeva, Daniela Koch, Jan Longeric, Amani Maache, Anastasia Melai, Jessica Menger, Nathalie Moran, Maria Camila Muñoz, Juan Carlos Richard, Lina Roca, Oumaima Salmi, Richard Tahan.

Special thanks to Klaus Schüller M.A. and Niklas Brehm M.A.

Co-chair Keynote Workshops

Prof. Ulrike Pfeifer (Frankfurt UAS)

Conference Chair

Prof. Sabine Breitsameter (Darmstadt UAS/DKMI)
 Master's program International Media Cultural Work



www.youtube.com/channel/UCR3X25zJ9mla0zdzb5SWV5Q

Earthscape

By Melinda Barrie

On the night of the 2018 Geelong After Dark GAD festival, sound artists Ros Bandt and Vicki Hallett sounded the mysterious upper reaches of the cosmos and the subterranean waterway habitats below in *Earthscape*.

Bandt and Hallett initially conceived the idea for a collaborative venture on a road trip to attend the Australian Wildlife Sound Recording Group workshop in the Pilliga State Forest in northern New South Wales. Along the way they discovered they had a long association with Geelong in common and a shared passion for probing the mysteries of the universe. A hallmark of both artists' work is their site-specific investigations of country using their hydrophones as sonic surveyors of the health and wellbeing of the environment. GAD's theme for 2018 'Earth' provided them with the perfect opportunity to bring their investigation into the deep history of land and sky to fruition.

Earthscape was staged in the liminal space between the futuristic architecture of the dome building and the manicured environs of Johnson Park with its hidden past as a wetland in the centre of Geelong. The show drew together three distinctive stories in sound – *dish*, *probe* and *scope* – which provided the visitor with contrasting viewpoints on the *changing earth in the cosmos*. Jem Savage's mesmerising electroacoustic backdrop and Marie Pangaud's captivating projected montage, combined with well-placed sounds sculptures made from found objects, ensuring the show was an immersive, multi-sensory experience for all.

I. Dish

As clouds scudded by overhead in the evening skies and the wind whipped around the colourfully lit stage, the show opened with both artists standing silently in a bath of eerie purple light as the cymbals and chains rocked and clanked within their wooden rack in readiness for the night ahead.

The electroacoustic soundtrack thundered across the cosmos, punctuated by Aeolian harp bursts and echoes of broadcast voices on their journey to the outer reaches. In response the long slide whistles swooped in sonic arcs of glissandi as they flew up higher and higher through the tempestuous atmosphere. Images of *the dish*, Parkes Radio Telescope, flickering overhead on



Ros Bandt (tarhu) and Vicki Hallett (clarinet), *Earthscape* Performance, Geelong After Dark

the space age style dome building made it is easy to imagine the radio waves travelling up through the stratosphere on a mission to gather knowledge from beyond the terrestrial boundary and then beam it back to earth. Our planet with its thin blue atmosphere observed from up high is a salient reminder of its celestial fragility.

II. Probe

Back on earth it is now time to consider the land and human intervention under the constantly shifting images of the Artesian Bore and Budj Bim. Bandt and Hallett have come prepared for this investigation, equipped with their luminescent PVC pipes that whirled and droned within the throb of the live electronics. They moved with measured steps, past the orange hues of the sandy desert bowl as they made their way ceremoniously to the eerily glowing water dish. Deep blue ethereal light played across their ghostly faces as the industrial soundscape pulsed around them. They then carefully dipped their pipes and egg beater into the depths of the watery microcosm to simultaneously *probe* and activate the subterranean world of ancient creatures and myth. Enthralled audience members gathered in close to watch as the still phosphorescent blue water bubbled into life. The tiny inhabitants whirred, danced, crackled and span gleefully through their fathomless aquatic domain.

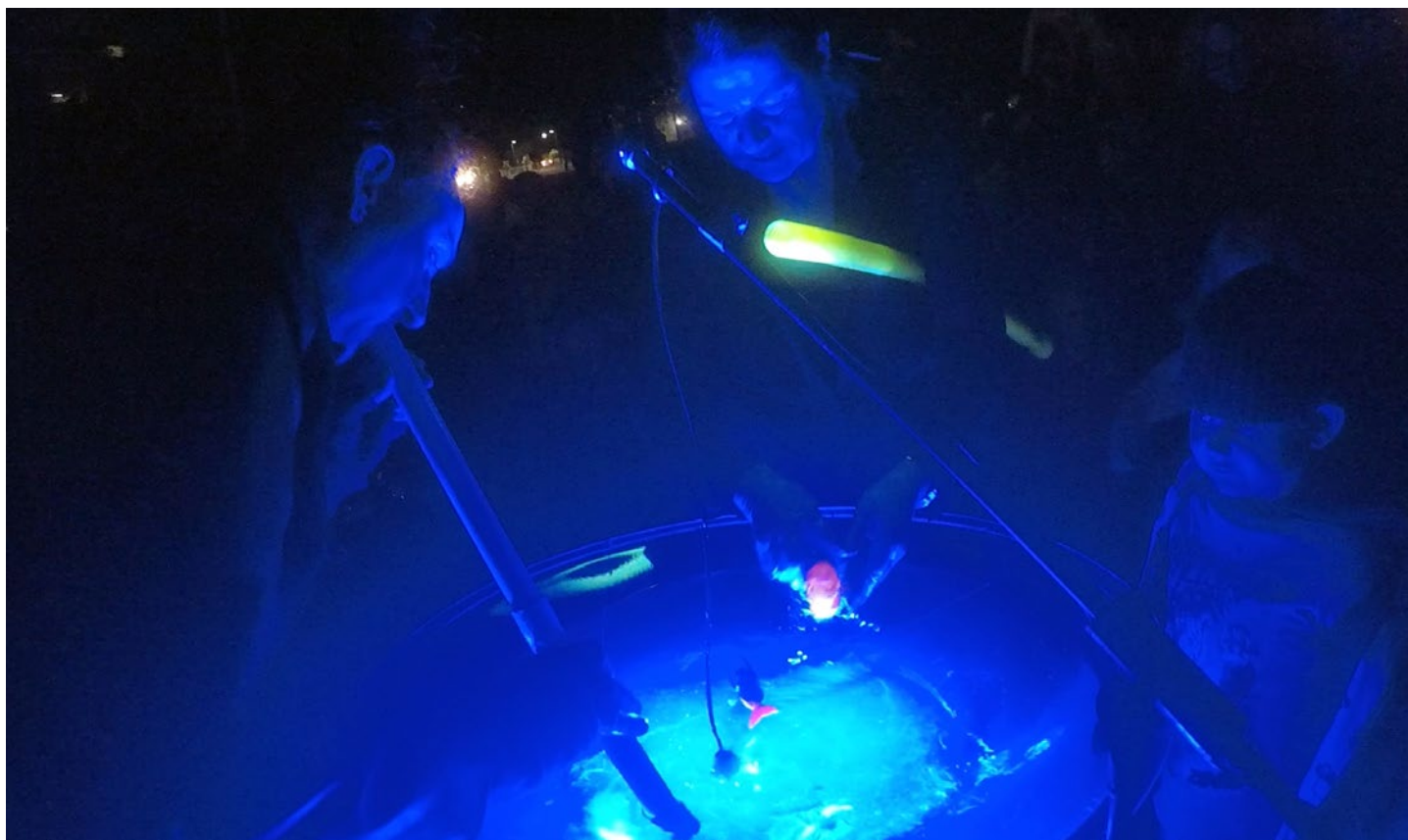
Water bottles, springs and chains, the artefacts of industry hanging in their frame

are set in motion with the hectic beat of the mallet and the rasp of the finely strung bow. The wind moved briskly across the stage as the gong resonated wildly in sonorous ripples that merged into the beat of the machine as it moved faster and faster, crashing and clanking with the elements until it slowly subsided.

III. Scope: [Buckley's Falls and Mangroves at Sheep Wash Barwon Heads

As the whirring creatures and machinery are stilled and the wild ride through the maelstrom and raw energy of the *Dish* and *Probe* is finally concluded. The transition to the final movement *Scope* is announced by the rattle of the percussive shells an acknowledgement of the need to take stock and reflect on the journey thus far. A sense of stillness prevails and the silvery feathers positioned in an upright position in the artists hair and on the head of Bandt's distinctive *long necked string instrument*, the tarhu emphasis this change in tempo. The sense of ceremony, spirituality and wisdom that had been tacitly acknowledged in the first two movements had now given way to full expression in the third.

The sounds of Buckley Falls located near Fyansford, Geelong cascade through the first half of *Scope*. The long soulful notes of the clarinet ebb, flow and intertwine with the sounds of the waterways flowing through the volcanic crater full of water, dead cars and urban debris. In this place named after



Original water sculpture with hydrophones, Earthscape Performance, Geelong After Dark

the legendary escaped convict William Buckley there is a pervasive sense of eeriness and otherworldliness which is beautifully evoked by the mournful call of the clarinet in conversation with the maddened bowing and screams of the tarhu.

The mood then shifts again for one last time as Bandt and Hallett reach their final destination at the Barwon Mangroves where previously introduced threads and narratives coalesce. The meditative sound of the composed piano drifts slowly through the estuary, an elegy to the role mangroves play in the health of the ecosystem. A live sonic overlay shaped by the rich, deep notes of the tarhu and clarinet unite in reverent harmony to investigate this ancient liminal habitat between land and sea. It is the earth's clarion call for a more balanced approach to our *fragile ecosystems and endangered species*.

As the show draws to a close and the duet ends, the tarhu in one last burst of voice cries out in empathy with the chatter of the mangroves and the growl of the eels in a final plea to listen and take notice.

Epilogue

As *Earthscape* concluded, the peoples of the Wadawurrung nation gathered together in Johnson Park to perform their Welcome to Country and smoking ceremony. Banana palms bathed in red and blue light swayed

in the evening breeze as ceremonial smoke and the sounds of traditional song floated around the sacred procession.

Artists

Earthscape was produced and performed by Ros Bandt and Vicki Hallett in collaboration with Jem Savage and Marie Pangaud. Hallett and Savage are also co-founders of the New and Experimental Arts Laboratory NEAL in Geelong.

Geelong After Dark 2018

Across one night the city centre of Geelong was brought to life by a program of interactive street performances and installations, which were situated in unexpected public spaces, encouraging visitors to experience a constant flow of song, dance and theatre.

Featured Sites

Places visited in *Earthscape* were Lake Bolac Western District Victoria, Buckley Falls Crater, Geelong, Barwon Mangroves, Pilliga State Forest, NSW, Artesian Bore, NSW and the Radio Telescope 'Dish', Parkes NSW.

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[http://www.artsclub.com.au/festival/news-article/sponsored-content/festivals/brooke-boland/](http://www.artsclub.com.au/festival/news-article/sponsored-content/festivals/brooke-boland/responding-to-earth-through-performance-sound-and-light-255573)

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About the Author

MELINDA BARRIE is a Melbourne-based archivist, working for one of Australia's leading universities. Her research interest has to do with intersections between heritage, industry and community, and she has written and presented extensively on the topic. In addition she has a practical involvement and interest in the significance of Australia's sound heritage. Barrie is former editor of the Australasian Sound Recording Association's (ASRA) journal *Sound Archive* 2010–2015 and she is still a member of the editorial committee. In 2017 she completed her Master's in Cultural Heritage at Deakin University.

RMIT Gallery Chaos & Order: Sonic Arts Collection Review

By Melinda Barrie

Review of the sonic art works at the RMIT Art Gallery's exhibition Chaos & Order: 120 Years of Collecting.

Societal concerns about the fragmentation of democracy, identity and climate change are reflected in contemporary artistic preoccupation. Reference to these ideas were apparent in the art work on display in this show.

Introduction/Context

RMIT Gallery recently celebrated its longevity in the field of collecting by the presentation of a survey of its art works in *Chaos & Order: 120 years of collecting at RMIT*. The exhibition was a forum for students, alumni and local and international artists in a range of mediums including sound. It was also an opportunity for the Gallery to examine its own collecting practices. The Gallery collection was started in 1887 and for most of its history developed naturally of its own accord. The organic nature of the Gallery's collecting is represented by its five broad themes, 'Self', 'Other', 'Form', 'Protest' and 'Place'. They are defined as:

- 'Self: The body, identity, gender and race'
- 'Other: The unknown, the surreal, the uncanny, death, the sublime'
- 'Form: Shape, space, gesture and time'
- 'Protest: Social realism, dissent, outrage'
- 'Place: Landscape, urban versus natural environments, home and belonging' (Buckingham 4 June 2018)

Exhibition Theme

The chaos and order theme emerged as a response to the tension between the institutional desire to classify and recognition of the chaotic origins of art. The show acknowledges the historical lineage of the art museum dating from the time of the Enlightenment. (Buckingham 2018: 5) From the time when the noisy 'Cabinet of Curiosities' (Bennett 2018: 162) was first opened up to the public to its most recent incarnation as a 'stadium' of silence and

contemplation. (Bubaris 2014: 391) For more than two hundred years complex science-based taxonomic systems via didactic panels were used to convey knowledge to visitors. These text based systems of knowledge privileged the educated and literate. Sonic art that is chaotic by nature and complex to classify is now emerging from the margins as an established presence in the gallery side by side with established art forms and systems. The aim of *Chaos & Order* was to challenge the established order and ask why do we have public collections, who are they for and what is their purpose?

Collection Survey

Chaos & Order marked the first time a survey had been done of the Gallery's own holdings which contains over 2,500 art works. Of the 2,500 works 80 items were chosen to showcase the Gallery's diverse visual, sculptural and sonic media collection. Seemingly arbitrary combinations of art works from across more than a century of collecting were shown together, loosely grouped by the broad themes.

Of special significance are the seven sound art works which were selected from the Gallery's newly established Sonic Art Collection. The Sonic Art Collection is of note for being one of only a few known collections that are wholly dedicated to the acquisition and display of 'sound art'. A rarity in a visual art dominated world. The conception and launch of the Sonic Art Collection in 2012–2013 was the end result of an active exhibition program of experimental sound work dating from 1996 and long-term institutional collaboration and support. The seminal influence of Luigi Russolo's 1913 publication *Art of Noises* on the development of sound art as a genre during the twentieth century, is also acknowledged in the gallery statement. (RMIT Sonic Art Collection)

Local and international sound artists featured in the show represent a selection of the Gallery's commissioned works and high-profile acquisitions. The commissioned works of Steve Stelios Adam's (AUS) *Passing By...More Quickly*, Philip Brophy's (AUS) *Atmosis* and Douglas Quin's (US) *Madeira Soundscape* were premiered at the 2013 RMIT Gallery's exhibition *Sound Bites City*. Sarah Edwards' (AUS) *Echo Chamber* premiered in 2013 at First Site Gallery and Ros Bandt's

(AUS) *Raptor*, Chris Watson's (UK) *Namib* and Nigel Frayne's (AUS) *What You Might Have Heard* were acquired by RMIT Gallery after their respective international premieres.

Collectively and individually they represent a generation of sound artists whose pioneering work in the use of field recordings, electroacoustic composition and passion for sound have contributed much to raising awareness about global climate change and anthropogenic impact on a diverse range of urban and natural settings.

The sonic works in this survey exemplify a range of approaches that challenge the listener to explore unfamiliar landscapes and probe those that are familiar. Areas of enquiry include a collaboration with museum professionals and use of archival sound recordings of frogs. (Edwards); use of electro-acoustic composition and recorded sounds of the Golden Eagle in flight (Bandt); transformation of urban sounds into an orchestral soundscape (Brophy); field recordings of ambient urban sound used to explore motion (Adam); compression of time and ecology (Watson); acoustic urban environment (Frayne) and cultural heritage of place (Quin).

Location

Chaos & Order spanned two galleries, the RMIT Gallery on the ground floor and the First Site Gallery directly underneath in the basement. Both galleries occupy the heritage listed Storey Hall building located on Swanston Street in the Melbourne CBD. Storey Hall's tall nineteenth century stone and brick frontage gives the impression of quiet formality that is in sharp contrast with the animated activities of its interior. The physical layout of the display was defined by its five collecting categories. Strong primary colours were used to define each theme which created mood and a point of navigation for the visitor. Blue was used for 'self', black for 'other', red for 'form' and white for 'protest' and 'place'. Polarisation and provocation of the audience were the defining aims in this show and the allegorical use of bold colour was one of many manifestations of this idea.

Sound Room

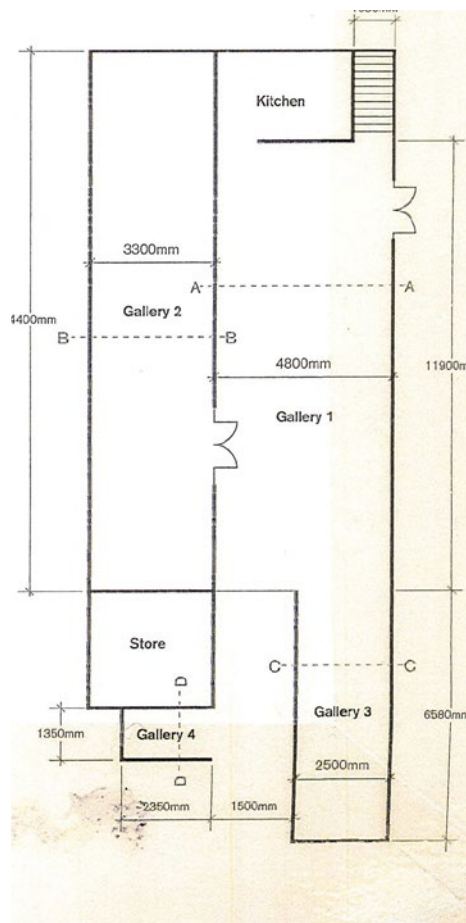
The exhibition of electroacoustic sound art works has found increasing mainstream acceptance in museums and galleries.

Reviews (continued)

However, the availability of exhibition spaces specifically designed for the exhibition of sonic art works remains rare. Traditionally, gallery design has privileged the visual arts and sound art has been consigned to a supporting role or is only been accessible via a tinny pair of headphones. The *Chaos & Order* exhibition actively confronted this deficit by allocating a whole gallery space for the display of its environmental sound art installation.

The entry point into the 'place' and 'protest' underground gallery was tucked away to the left of the main gallery foyer. A set of winding stairs led down to a corridor where the visitor was welcomed to the 'place' gallery by Kamilaroi artist Reko Rennie's 'wall art' *I was always here*: 'an acknowledgment of country' (Buckingham 4 June 2018). The corridor lead to the basement which was divided into three distinct display areas. According to the floor plan 'Gallery 2' was the location of the sound art installation.

The basement belongs to the student run First Site Gallery where experimentation and the testing of new ideas is encouraged (Hirst 2006 p. 3). It was opened up specially for the display of *Chaos & Order* 'Place' and 'Protest' themed artworks. It had formerly been home to the Working Men's Technical College, a place where generations of printers, artisans, radio operators and engineers learnt their trade. During the war years and the post war period, RMIT played a key role in the training of service personnel. This is reflected in the architectural design of the bunker with



First Site Gallery Floor Plan, 2006, Brook

its polished concrete floors, utilitarian white wall finish and its elongated structure topped off with a curved corrugated iron ceiling. RMIT alumni and artist Sarah Edwards paid homage to the First Site Gallery's training

and architectural heritage in her sound work *Echo Chamber*. Her work featured the sounds of an extinct frog who used to live in nearby wetlands that have been lost to urban development, as well as the sounds of the gallery's interior and exterior. Edwards art practice interrogates the use of classification systems to create meaning in the natural world. Foucault's *The Order of Things* has been influential in her work (Edwards 2018).

The First Site Gallery's 'Gallery 2' space was temporarily repurposed into a sound room. It was fitted out with a sixteen-speaker array which were shrouded in white gauze covered cages. The speaker boxes were hung in uneven rows on cross beams across the gallery ceiling. This irregular rectangular design created an intimate haven for listening to sonic art. [image 2 Gallery speaker array, photo Melinda Barrie 7 June 2018] The spatial design of the array filled the space with sound that surrounded and immersed the visitor. Of note were the variations in spatial design between each work, accommodated by a single configuration. From a listener's perspective, the variations in design and number of channels was subtle, and without previously hearing the work close difficult to detect. The generic installation design meant that all works ranging from six to sixteen channels were arranged to accommodate the setting. Ros Bandt's circular sound design for her six-channel work *Raptor* [image 3 Ros Bandt Raptor sound design 4 September 2014] illustrates this point.

Visual elements were kept to a minimum to focus the visitor's attention on the aurality of the works. The gallery was big enough for the visitor to walk around in and choreograph their own unique aural experience. At times the faint sounds of Nathan Gray's audio-visual work *Species of Spaces* which was next door in the 'protest' gallery could be heard—this did not distract. A stack of folded seats were also provided for the comfort of the listener. They also served as a tangible clue about the duration of all the works combined.

The recordings were played on a continuous loop in alphabetical order by artist first name with a duration of close to two hours. This arbitrary decision to alphabetise effectively democratised the play list. The moment when the listener arrived was the start of the show which emphasised the boundless temporality of sonic art where the notion of beginning or end becomes subjective. For the more curious there was a list of the sound artists on the gallery wall and an



Gallery speaker array, photo by Melinda Barrie 7 June 2018)

Reviews (continued)

RMIT Art Collection app which contained detailed synopses of each artist and their work. A limitation with the app was its inability to sync the information displayed with the artist who was playing.

The shift from one work to the next was seamless and played together they could have been considered to be one long work. Paradoxically this arrangement had the effect of reducing the 'place' specific features of each composition and create an alternative conception of many chapters of one unified soundscape. In this re-imagined landscape, the listener experienced a sense of timelessness as the Golden Eagle wheeled overhead through the skies, the insects chattered in the African desert, the chant of religious ceremony, the flow of ancient waterways and the call of the frog long extinct. Interspersed with these natural sounds were the familiar aural motifs of urban life in Melbourne such as the tram bell and snatches of repeated laughter and conversation.

Conclusion

RMIT Gallery is to be applauded for its recognition of the signification of sound art as a genre in its own right by the establishment of its own Sonic Art Collection and the creation of purpose designed multichannel space to display its collection. I hope this installation serves as a model for future exhibitions and installations.

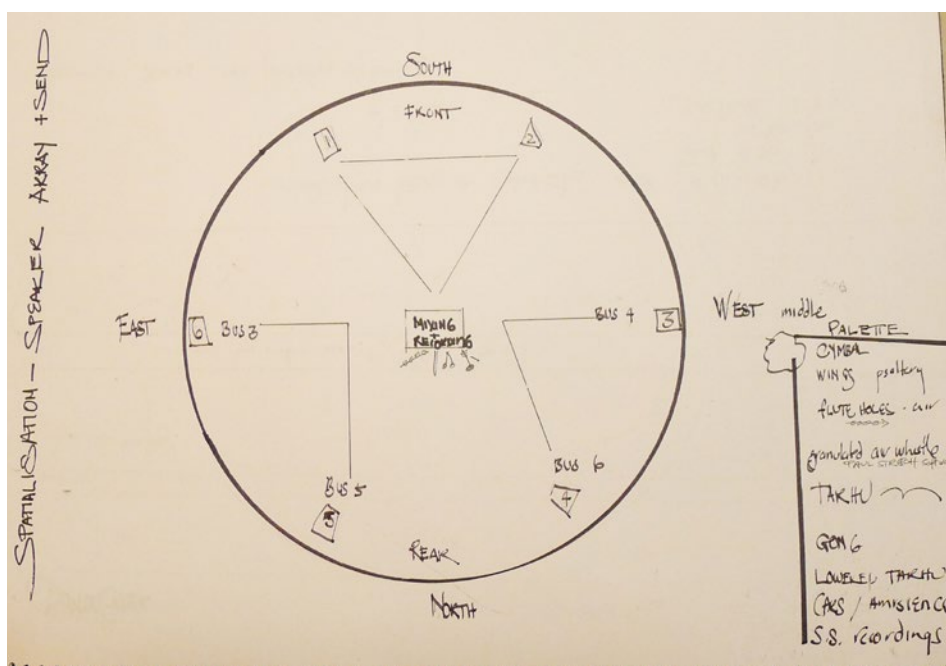
In memory of Nigel Frayne who was one of the founders of the World Forum for Acoustic Ecology (WFAE) and later the Australian Forum for Acoustic Ecology (AFAE). Of note was Nigel's persistence and patience to help build the newly formed discipline 'acoustic ecology'. Nigel's sonic work 'What you might have heard' was featured in Chaos & Order.

About the Author

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Freshwater Listening

By Dr. Ros Bandt

AFAE 20th Anniversary Celebrations

Freshwater Listening was a free 2-day event celebrating freshwater in the precious box ironbark environment of regional Australia's goldfields. The event included soundwalks through the forest, hydrophone listening in two dams at the Acoustic Sanctuary, experiential workshops on how to use hydrophones (underwater microphones), listening to the aeolian harps sound sculpture, an exhibition at the Tate Gallery at the Fryerstown School and scholarly and artistic talks about ways of listening from a variety of experts in the field.

The event began with Uncle Ricky Nelson and brother Cain, who gave a warm sung welcome to Country after which a blue Crane flew over, an omen to keep listening to first peoples. Artists, scientists, ecologists, academics, friends and locals came together to do just this.

A key figure was Dr. Leah Barclay, who has pioneered new approaches to ecoacoustics and has done extensive research with the Australian Rivers Institute on freshwater listening and acoustic ecology. She was able to identify the species we heard in the dam through hydrophone recordings and gathered the files everyone had recorded for the art work performance the next day (many gigabytes of sound). She helped everyone on site to understand hydrophone possibilities and along with Vicki Hallett assisted with hands on recording and listening. Andrew Skeoch, an outstanding field

recordingist from Listening Earth spoke on his field recording practice. He along with Leah and Vicki are members of the Australian Forum of Acoustic Ecology which was celebrating twenty years in Australia as part of the Freshwater Listening event. The launch of the event and the exhibition was sponsored by Guilford Vineyard and the vineyard owner, Mandy Jean, spoke of her insectarium and goats milk spray which has replaced chemical use on the vines.

In the Tate Gallery the exhibition Freshwater Listening brought together sound artists Vicki Hallett and Ros Bandt, Elisa Stone (contributing photograms) and Georgia Snowball (performance artist) in an exciting investigation of what it's like to be a bug in freshwater, through listening to their behaviour. Georgia was asked to come to the dam and respond to what she heard through movement earlier in the year. Donned in a green poncho, she vibrated and sensed this new underwater world brought to her through headphones from 6 underwater microphones. This dramatic event was "so intense" for her. Three sets of headphones shared this audio material with the gallery visitors.

The artists explained their different approaches in the artist talks which followed. The Fryerstown School was a friendly venue with the locals providing fabulous fresh

lunches and helping campers and event goers with their inimitable country flair, flowers, check table cloths and generous help with tech equipment. Sunday's public participatory concert was an inclusive sonic event with everyone understanding the freshwater habitat they were part of. Single sounds of insects were played by the public, water was poured through large chalices and a fountain in the centre was maintained manually. Instrumental wind moments from Brigid Burke, Megan Kenny, Vicki Hallett with Ros Bandt on Tarhu, were heard along with the dissolved voices of Doug Ralph and poet Bernie Janssen, with a live electroacoustic mix of the freshwater recordings by Leah Barclay. So much inspiration and sharing at this event. Notable academics including Jon Drummond came and contributed along with video artists and young composers and musicians. I was thrilled to say that everyone cared for the bush and the venue with great aplomb and shared the acoustic spaces of this unique event in generous and quiet ways. Thankyou to all the helpers and participants who made this such a great event.

The concert can be heard from the Australian wildlife Sound Recording Group website. Andrew Skeoch has kindly recorded the concert there.

More feedback on this event in sound and photos can be seen on the Australian Forum for Acoustic Ecology's social media and website, as part of their 20th Anniversary celebrations.

Listening to Country: Exploring the value of acoustic ecology with Aboriginal and Torres Strait Islander women in prison

Sarah Woodland, Vicki Saunders, Bianca Beetson, Leah Barclay

Listening to Country is an arts-led research project exploring the value of acoustic ecology in promoting cultural connection, maintenance and wellbeing among Aboriginal and Torres Strait Islander communities and groups who experience separation from family, culture and Country. The project began with a pilot phase in Brisbane Women's Correctional Centre (BWCC), where an interdisciplinary team of researchers worked with incarcerated women to produce a one-hour immersive audio work based on field recordings of natural environments (of Country). The pilot was built on several years' engagement with BWCC delivering participatory drama projects, including radio drama (Woodland forthcoming). Our decision to use acoustic ecology and immersive audio resulted from a direct request from a group of Aboriginal women at BWCC to create a "culturally relevant relaxation CD"—a sound recording for the purpose of reducing stress and connecting to Country.

In Australia, as in other settler-colonial nations such as Aotearoa New Zealand and Canada, Indigenous peoples are imprisoned at an alarming rate. Aboriginal and Torres Strait Islander women are the fastest growing prison population in Australia. Representing nearly 30% of prison population, they are currently 21.2 times more likely to be imprisoned than non-Indigenous women (Australian Law Reform Commission 2017). The majority are mothers, experiencing the trauma associated with separation from family, community and Country, and their incarceration creates a ripple that affects entire communities (Walters and Longhurst 2017). This is part of the "torment of powerlessness" (Referendum Council 2017) that Indigenous peoples experience in Australia: the continued legacy of forced removal, marginalisation and incarceration that began with Australia's establishment as a penal colony; and the systemic racism that pervades our contemporary institutions (Fforde, et al. 2013; Paradies 2006; Henry, Houston & Mooney 2004).

Current prison programs are failing to address the specific needs of Indigenous



Aunty Melita Orcher from the Brisbane Council of Elders listening to the sounds beneath the surface of the Brisbane River with hydrophones

women, and research has shown a demand for holistic, innovative and flexible approaches to engage and support women and their children before, during and after entering prison (Kendall et al. 2019). Connection to Country is central to most narratives of Indigenous wellbeing. In order to increase Indigenous wellbeing, the focus of many efforts in native title, health, education, environment and cultural heritage lies in strengthening connections to place, belonging and Country. The *Listening to Country* pilot in BWCC therefore represented an original experimental creative approach to promoting cultural maintenance and wellbeing among mothers, daughters, sisters, aunties and grandmothers living off Country in prison.

The emerging outcomes demonstrate potential for our acoustic ecology approach to be used for healing and rehabilitation beyond the prison walls and in communities. The process of creating an immersive audio work with the women was underpinned by a number of key principles and processes. Acoustic ecology formed the

bedrock for producing the audio work, and for understanding the connections between listening to environmental soundscapes, and the wellbeing of individuals and communities. In Australia, acoustic ecology has emerged as a socially-engaged, dynamic and interdisciplinary field concerned with the ecological, social and cultural contexts of our sonic environments. Acoustic ecology evolved from research investigating the value of listening to natural environments and the negative implications of exposure to noise on our health and wellbeing (Schafer 1977). Acoustic ecology incorporates other understandings around the value of listening including Steven Feld's "acoustomology" with sound as a distinctive medium for knowing the world (Feld 1996) and Pauline Oliveros' "deep listening" where sound facilitates expanded consciousness and healing with transformational changes in the body and mind (Oliveros 2005).

From an Indigenist research perspective, this echoes the practice and principle that is becoming more widely known as *dadirri*—listening to the world around us, the Country.



Binaural microphones recording the dawn chorus in the rainforest on the Sunshine Coast

Dadirri comes from the Ngan'gikurunggurr and Ngen'giwumirri languages of the Aboriginal peoples of the Daly River region (Northern Territory, Australia). Aboriginal healer and health worker Miriam-Rose Ungunmerr (2017) introduced this term to frame the philosophy and concepts behind her work and ways of being the world. As a practice, dadirri means listening with more than the ears, it is whole body listening.

The researchers were conscious of using sound intentionally to promote “acoustic agency” (Rice 2016), where participants might take control of the sonic environment and resist the oppressive industrial soundscapes of the prison. On a larger scale, LaBelle (2018) frames the burgeoning movement towards political resistance through sound and sonic cultures as “sonic agency.” Indigenous storywork is grounded in the idea that meaning making occurs through the storytelling, and our bodies *are* the story itself (Hughes 2013, Archibald 2008). Working with story in Aboriginal health research means moving past toxic stories and telling our stories in ways that make us stronger (Abadian 2006, Wingard and Lester 2001). Arts-led and poetic inquiry were central to our methodology, where creative acts such as drawing, sound maps, poetry, storytelling and yarning enhanced and expanded our immersive listening and acoustic ecology processes (Prendergast, Leggo, and Sameshima 2009).

The team used these principles and approaches over a two-week period with a group of women at BWCC, a reception and remand centre located just west of Brisbane, where Aboriginal and Torres Strait Islander women make up nearly a quarter of the prison population. The participant group fluctuated in size between one and twelve, depending on a range of outside factors that included health or legal visits, transfer to other centres, or release. The process involved listening to

environmental soundscapes that we brought in from outside, yarning together about what feelings and memories these evoked, and then exploring what sounds or environmental soundscapes might connect the women to their Country, or their “belonging place.” It was important to include the broader idea of belonging for those women who did not know their Country or ancestry.

We then visited the locations the women selected and made environmental field recordings at different times of day. This included dusk soundscapes with a crackling camp fire, dawn chorus in the rainforest, laughing kookaburras by a river, local waterfalls, ocean waves and dolphins underwater. The field recordings were edited into short soundscapes from each location (over 15 sites) and brought back to the prison to begin the process of listening and collaborative composition with the women. We also made recordings inside the prison of words, poetry, breathing, heartbeats, clapsticks and footsteps that were layered and sculpted with the environmental soundscapes. This process was not without its tensions. For security reasons, we were unable to bring a laptop into the prison, and so the composition process in the prison was done with drawing, brainstorming and constructing “sound maps” using paper print-outs. This, in turn, created tensions around cultural

safety and ownership, where the women felt less control over the creative process. The process of deep listening and recording was challenged by the industrial soundscape of the prison environment, with slamming doors, air-conditioning vents, loud alarms, two-way radio chatter, and interruptions all disrupting the potential for quiet focus and reflection. And yet there were also many moments of meaningful engagement and connection, where the women described the soundscapes that they heard and composed as making them feel calm, relaxed and free. Listening to the final soundscapes in the prison suggested the process had been beneficial with comments such as the soundscapes made them forget they were in prison and feel “spiritually alive”.

The final work was produced in surround sound, using a quadraphonic array for playback in the prison to enhance the sense of immersion. The work also exists as a binaural mix (for headphone playback) and a stereo version for use in knowledge translation settings. The women provided the research team with permission to share the work outside the prison, but as the soundscape was produced for a very specific purpose inside the prison, the version that is shared publicly has been adapted with changes including filters on voices so the participants cannot be identified. During future iterations of the



Recording footsteps during Listening to Country workshops in BWCC (February 2019)



Listening to Country workshops in BWCC (February 2019)

work, we hope to make the soundscape as accessible as possible inside the prison and will shift away from headphone listening experiences to transducers in public areas to diffuse the sounds. This could include listening walls where leaning against the surface of a wall will trigger the soundscapes to play through the listener's body and allow them to connect with Country in an immersive and embodied way. This would also open up the possibilities to shift away from a fixed media experience towards live streams and responsive soundscapes that facilitate more personalised listening experiences.

We are still in the early stages of analysing the data from the pilot, and developing recommendations for how to enhance our approach. From our experience in BWCC, it seems that this process certainly has promise, and the work is gathering support from Elders and other stakeholders in the community. We are planning to expand the program to other prisons and exploring how *Listening to Country* might be transferable into a number of different wellbeing contexts, including with at-risk youth, Elders/seniors off Country in care or hospital, women transitioning from prison to the community and more. The pilot will inform further development of the approach with additional groups in the community, with capacity development and knowledge translation activities occurring throughout Australia to explore these

possibilities in 2019.

Notes

1. The *Listening to Country* pilot in BWCC, and the resulting knowledge translation, has been supported with a grant from the Lowitja Institute for Aboriginal and Torres Strait Islander Health Research. The project team consists of two Aboriginal and two non-Aboriginal researchers, and two Aboriginal Elders. Dr. Vicki Saunders (Gunggari) is a health professional and emerging scholar who uses arts-led and poetic enquiry in the field of child protection and family wellbeing. Dr. Bianca Beeton (Gubbi Gubbi/Kabi Kabi) is a visual artist and curator, and Director of the Contemporary Australian Indigenous Art Program at Griffith University. Dr. Sarah Woodland has been developing creative drama-based approaches to wellbeing in Brisbane Women's Correctional Centre (BWCC) for the past seven years, recently finding radio drama, audio recording and soundscape to be highly effective in engaging the women. Dr. Leah Barclay is a sound artist and acoustic ecologist whose work investigates the value of acoustic ecology as a socially engaged, accessible, interdisciplinary field that can inspire communities across the world to listen to the environment. Aunty Melita Orcher and Aunty Estelle Sandow from the Brisbane Council of Elders have

been working for several years as volunteers in Queensland prisons to reconnect incarcerated Aboriginal men, women and young people with family, Country and culture. The team was supported by an advisory group that included the Brisbane Council of Elders and Dr. Claire Walker (Wiradjuri), Director of the Murri Dhagun cultural unit of Queensland Corrective Services.

2. The research discussed in this chapter was completed with support from Queensland Corrective Services. The views expressed herein are solely those of the author and in no way reflect the views or policies of Queensland Corrective Services.

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Listening to Country workshops in BWCC (February 2019)

Emerging Researcher Profile

By Jesse Budel



Ral Ral Creek at Calperum Station (photo by Jesse Budel, 25 May 2019)

I am a South Australian composer, sound artist, curator and arts facilitator whose work is informed by acoustic ecology and ecoacoustics perspectives.

My recently-completed PhD project, *Ecotonicity, or Adapting Soundscape Ecology to Creative Practice: Ecological Sound Art Responses to Four South Australian Ecosystems*, presents a creative framework connecting and adapting the principles, frameworks and methods of soundscape ecology to ecological sound art practice.

Ecotonicity considers the adaptation of soundscape ecology research, fieldwork and analysis as it relates to creative concerns of project conception, data collation, creative material preparation, compositional assemblage, artistic realisation and post-project reflection. Additionally, the framework appraises roles of human and non-human agency (via Karen Barad and Timothy Morton), and the inherent role and implications of technological mediation, as related

to soundscape ecology and creative practice. Ecotonicity allows a reconsideration of the macro- and micromorphological relationships of ecosystems in creative works, which engages the ethical concerns of site-specific practice and impact of creative work on ecosystems and soundscapes.

The creative framework was tested through four creative site-specific works, each in response to a different South Australian site—Mobilong Swamp (swamp ecosystem), Long Island (riparian ecosystem), Featherstone Place (urban ecosystem) and Farina (desert ecosystem)—and each employing multi-channel surround sound arrays and acoustic instrumentation. These creative projects act as case studies, creatively expressing various perspectives related to place, ecosystem and soundscape.

My practice and research have continued in several new projects around South Australia.

One is the *Riverland Biosphere Soundscape Lab*, which I facilitated held at Calperum

Station in South Australia's Riverland on May 24–26, 2019. Funded by Country Arts SA and part of the international Biosphere Soundscapes program developed by Leah Barclay, the Lab brought together artists, scientists and community members who took part in field recording workshops, creative work listening sessions, expert presentations and group discussions. A highlight of the Lab was a visit to the TERN (Terrestrial Ecosystem Research Network) Supersite tower in the Calperum Mallee, which has monitored the mallee canopy since 2011, with ongoing long duration acoustic recordings occurring daily since 2013.

Another is the *Featherstone Sound Space*, Australia's first permanent, urban surround-sound installation exhibition site. Located in Featherstone Place at the heart of Adelaide's CBD, the Featherstone Sound Space draws inspiration from sound artist Jordan Lacey's concept of Sonic Ruptures, which are urban sound installations intended to improve

Research *(continued)*

the affective qualities of urban acoustic environments. Following a 2018 trial installation in collaboration with BASEM3NT Creative Studios, Zephyr Quartet and Krix Loudspeakers, the Featherstone Sound Space has received funding from Arts South Australia to install permanent infrastructure and to develop a year-long exhibition program. In 2019, the Space will feature 8 installations, four by myself and sound artists Tristan Louth Robins, Jason Sweeney and Sasha Grbich, and four new commissions by emerging and established South Australian sound artists.

A longer-term project is *Equilibrium*, a three year Country Arts SA-funded project exploring the acoustic environments of mental health units across regional South Australia. Through a collaborative, exploratory process, contemporary artists Vic McEwan, John Simpson, Tristan Louth-Robins and I will investigate and creatively engage with communities in mental health units and public spaces between Whyalla, Berri and Mount Gambier.

For more information, visit www.jesse-budel.com.



Dawn chorus recording at Riverland Biosphere Reserve (photo by Jesse Budel, 26 May 2019)



Aerial shot of Farina performance at Farina (photo by John Toogood, 22 June 2018)

Field Report: Sonic Mmabolela 2017, South Africa

By Vicki Hallett

Sonic Mmabolela 2017, conceived and directed by Francisco Lopez, was a workshop/residency for 11 selected international sound artists and composers. When I saw the call out for Sonic Mmabolela, I knew I had to apply. For a number of years I have used sounds of the African Forest Elephant from Cornell University's Elephants Listening Project, as the basis of my compositions and performances (examples of this work are available here: <http://vickihallett.bandcamp.com/track/elephant-trail-vicki-hallett-ep> and <https://vimeo.com/180280970>).

I have an interest in acoustic ecology, scientific research and analysis. My projects use these features to become the basis of compositions and live performances where my aim is to create conversation and greater understanding of cultural and biological diversity of ecosystems through sound.

With an opportunity to go to Africa, record in the field at such locations as the famous Mabolele Rock and Hippo Pool, as well as have the opportunity to work with Francisco and other renowned artists and a chance to develop my field craft further, my decision was made.

Mmabolela is a private reserve located on the border of South Africa and Botswana (see figure 1). The area has abundant wildlife including plains game, hippopotamus, crocodile, baboons, birdlife and insects.

The workshop involved field-work (diurnal and nocturnal), concerts, studio



Figure 2: Recording on the Bridge to Botswana. Limpopo River, South Africa. Photo by Vicki Hallett

work, presentations and discussions about creativity and the role of listening.

Throughout the residency there were opportunities for recordings ranging from short snapshots to long-duration overnight recordings. Our day often started out at 3:30am so that we were set up before the start of the dawn chorus. In the afternoons, we headed out to record and attend a concert (recording and listening to the dusk chorus).

There were opportunities to record overnight too (see figure 2).

My choice of recording equipment included hydrophones in the ground and

water, as well as microphones and contact microphones. Although I did not see an elephant, 3–4 months before the residency, elephants did cross the border and went through the Mmabolela region. All that remained for me to see was the spoor amongst which I placed hydrophones in the ground in the hope of obtaining some sounds, even long-range infrasound (see figure 3).

My experience was completed with the once-in-a-lifetime-opportunity to perform a dusk concert at the site of the famous Mabalele legend. Generally the story goes like



Figure 1: Location of Mmabolela Nature Reserve. Map data © 2018 AfriGIS (pty) Ltd, Google



Figure 3: Setting up overnight recording at abandoned elephant site. Photo by Barbara Ellison



Figures 4 & 5 (below) –Playing with hippopotami. Photos by Barbara Ellison

this: the Chieftain's daughter and child went down to the Rock. The crocodile jumped up and ate the Mother. The child went searching, calling the words "Ma (Mother)–Bolela (Speak to me)".

On arrival at Maboel Rock, we were greeted with the sight of a hippopotami pod. I sat calmly and quietly by the edge of the Limpopo River, seeking permission to approach and play. Once I was out on the Rock, I again sat peacefully and sought permission to be in the space. I played a Call based on my transcriptions of hippopotamus sounds and guide calls recorded earlier in the residency. As I started playing, one particular hippopotamus moved in to within 20–30 metres of my rock (see figure 4). As I played spacious 'Calls,' he (or she?) interacted with me snorting the 'Responses.' When I turned my back, responding to some birds, he snorted insistently to recapture my attention (see figure 5). The intensity of the moment was felt by the intimate audience on the bank and I could hear audible reactions from them. We were all a part of this special moment. The hippopotamus and I resumed

our connection for a few more moments, I then thanked him melodically for allowing me to visit. We maintained an intense visual connection before he disengaged and re-joined the family group. I felt no fear, just a sense of calm and being at one with the immediate environment. What a spine-tingling extreme performance!

I was also privileged to be asked by fellow participant, Mike Vernusky, to record his *south africa* composition. These two performances became final outcome presentations.

Sonic Mmabolela 2017 was an incredible opportunity to record in Africa and work with a diverse group of artists. I had extensive field-recording opportunities in an environment brimming with activity along with time to develop my field craft and the chance to perform live in memorable locations.

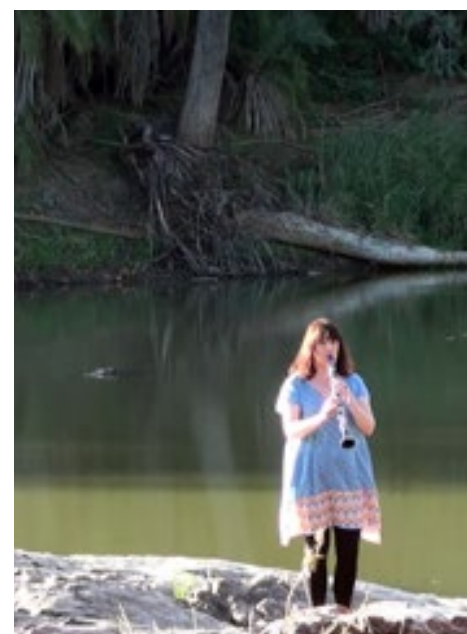
Vicki Hallett's participation in Sonic Mmabolela was assisted by a Professional Development Grant from the City of Greater Geelong.

Find out more about Vicki's creative work and research here: www.vickihallett.com.

Watch and listen to Vicki's Maboel Rock Concert:

Audio: <https://vicki-hallett.squarespace.com/recordings>

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The **Australian Earth Laws Alliance (AELA)** is a national not-for-profit organisation whose mission is to increase the understanding and practical implementation of Earth centred governance (or Earth jurisprudence) in Australia, with a particular focus on law, economics, ethics, education and the arts. Earth jurisprudence is a new legal theory and growing social movement. It proposes that we rethink our legal, political, economic and governance systems so that they support, rather than undermine, the integrity and health of the Earth.

The need for new governance systems has never been greater: as we face a climate changed world and transition away from our destructive reliance of fossil fuels, human societies need to create new ways of working together and nurturing the wider Earth community. AELA works to build long term systemic change, so that human societies can shift from human centred to Earth centred governance. Our vision is to create human societies that live within their ecological limits, respect the rights of nature and enjoy productive, sustainable economies that nurture the health of the wider Earth community. AELA is run by volunteers who are committed to the philosophy and practical implementation of Earth Jurisprudence.

From 2020 to 2022, AELA will be collaborating with the Australian Forum for Acoustic Ecology to co-host a range of arts activities and events under the theme of “Voices of Nature”. This theme will **encourage both the exploration of the concepts of voice, standing, representation, and agency of the natural world within human governance systems**, and also AELA’s desire to focus on sound art and acoustic ecology as key mediums for communicating and exploring nature’s voice(s).

Central to the AELA’s Earth Arts Program is the biennial Rights of Nature Australia (RONA) week, which features an international conference, public lectures, Peoples Tribunal, art exhibitions and other events. RONA biennials are scheduled for October 2020 and October 2022. Previous

events were held in October 2016 (RONA16) and October 2018 (RONA18). RONA18 featured an international Rights of Nature Symposium, a session of the **Australian Peoples’ Tribunal for Community and Nature’s Rights** (‘Tribunal’), a National Art Exhibition held at Brisbane’s Spring Hill Reservoirs, and several regional arts events connected to the RONA18 week.

The goals of the arts program, from 2019–2022, are to:

- Creatively bring awareness to the complexity and beauty of the living world--and the threats it faces--by sharing and promoting environmental sound arts, acoustic ecology, and ecoacoustics as the ‘voices of nature’.
- Creatively draw a wider audience to reflect on changes across ecological timescales through past and present sounds and soundscapes; and to imagine what may exist, or not exist, in the future.
- Connect with and amplify AELA’s bi-annual Rights of Nature Australia (RONA) Conference and Peoples’ Tribunal, which celebrate the rights of the living world and advocates for the Rights of Nature and eco-representation.
- Connect with and explore AELA’s bioregional governance initiatives, which advocate for creating new legal, governance and cultural frameworks for living within our ecological limits and building local custodianship and stewardship ethics.
- Create opportunities for the AELA Earth Arts Collective and other artists to learn about AELA’s Earth centred governance programs and to practice and collaborate with acoustic ecology practitioners and associated ecoacoustic scientists and artists.

Please visit <https://www.eartharts.org.au> for further information on how to contribute and participate.

Easter Piano Mill 2019. Photo by James K. Lee

