20 Years of Sound Environments

THE SOUND ENVIRONMENT CENTRE | LUND UNIVERSITY | 19 NOVEMBER 2024

Sound
Environment
Centre

20 Years of Sound Environments

19 November 2024
LUX: C121 Helgonavägen 3, Lund University

10.00–10.30 WELCOME BY SANNE KROGH GROTH
Sound Environments: Exploring, listening, positioning

Sound Environments marks the 20th anniversary of the Sound Environment Centre at Lund University. The centre was initiated in 2004 and established in 2005, with the ambition to bring ideas about soundscape and acoustic ecology into a transdisciplinary research context. The conference revisits this initial ambition and asks what roles research into sound and sound environments play in today's increasingly complex world. The Sound Environment Centre was inspired by studies into soundscape and acoustic ecology in Canada and elsewhere. It is worth noting that both the founders of the centre and of the World Soundscape project in the early 1970s all were composers who had in common a transdisciplinary approach to the study of sound. While the methods of study, scientific knowledge and ideological positioning have developed increasingly over the past 50 years, this transdisciplinary and collaborative approach is still the core of many successful studies of sound.

Sanne Krogh Groth is Director of the Sound Environment Centre (2018-2024) and Associate Professor of Musicology, Lund University. Her research concerns historiographic, aesthetic and political issues within the fields of experimental music and sound art. She is author of *Politics and Aesthetics in Electronic Music* (Kehrer 2014), and co-editor of *The Bloomsbury Handbook Sound Art* (with H. Schulze, Bloomsbury 2020), *Negotiating Noise* (with J. Mansell, Lund University, 2021) and *Traces of Sound* (with H. Frisk, Lund University 2024). Groth is PI of the research project *Java-futurism. Chronotopes of Sonic Activism in Indonesia* (2020-2025) and editor of *Seismograf Peer*.

10.30–12.00 PART I – REVERBERATION

Ethics, health and the physical condition of individuals exposed to sound

Moderator: Kristoffer Mattisson,

Associate Professor, Division of Occupational and Environmental Medicine, Lund University

- ***How does sound reverberate in minds and bodies? What is the effect of sound and noise exposure? How can research into this field be designed to embrace a multifaceted understanding of these issues?***

Mette Sørensen: Health effects of transportation noise in Denmark

In 2018, WHO stated that road traffic noise was associated with higher risk of ischemic heart disease, whereas for other investigated diseases, evidence was insufficient. We therefore performed a study based on all of Denmark. We estimated road traffic noise at all addresses, based on which, we estimated long-term exposure for 3.6 million persons aged >35 years. We found people within this population who developed major diseases and analyzed data considering socioeconomic status and air pollution. Road traffic noise was associated with higher risk of cardiometabolic disease, e.g. a 10 dB higher noise (most exposed façade) was associated with 4% higher risk of stroke, 4% higher risk of heart failure and 3% higher risk of diabetes. Additionally, road traffic noise at the least exposed façade was associated with higher risk of breast cancer and dementia. Our results suggest that traffic noise is a risk factor of major diseases besides ischemic heart disease.

Mette Sørensen is Group Leader at the Danish Cancer Institute, and Professor at Roskilde University. She has a master's degree in human biology (1998) and holds a PhD in Environmental Epidemiology from Copenhagen University (2003). She is a leading researcher within the field of traffic noise and health, focusing on investigating effects of noise in large populations. She has been heavily involved in studying effects of noise in relation to diseases not investigated previously, e.g. she was among the first to show associations between road traffic noise and diseases as stroke, diabetes, dementia, breast cancer, and infertility.

Stefania Serafin: Investigating aural diversity using extended reality

In recent years, aural diversity has emerged as a field acknowledging the fact that all humans have different hearing abilities that develop during a lifetime (Drever and Hugill 2022). Moreover, extended reality technologies have progressed in such a way that can be taken out of laboratory settings and used to train individuals with different abilities. In this talk I will present an overview of the technologies we have developed in our Multisensory Experience lab at Aalborg University in Copenhagen to address

different hearing abilities. The applications range from VR training of spatial awareness for children with hearing impairment, to augmented reality-based solutions to regain musical skills to coping with auditory hallucinations.

Stefania Serafin is Professor of Sonic Interaction Design at Aalborg University in Copenhagen and the leader of the Multisensory experience lab. She is the President of the Sound and Music Computing association, Project Leader of the Nordic Sound and Music Computing network and lead of the Sound and music computing Master at Aalborg University. Stefania received her PhD entitled *The sound of friction: computer models, playability and musical applications* from Stanford University in 2004, supervised by Professor Julius Smith III. Her research on sonic interaction design, sound for virtual and augmented reality with applications in health and culture can be found here: *tinyurl.com/35wjk3jn*

Tina Quartey: Soundbath

In many cultures, for thousands of years, sound has been used for meditation and healing. Specifically designed instruments, such as gongs and singing bowls and other sounds with a long sustain, are believed to have a profound impact on body, mind and spirit. In recent years the popularity of "sound baths" or "gong baths" within the area of yoga, mindfulness and the like has been constantly increasing. The mere physical aspect of this is about vibrations. We all know that sound is vibration, and this is how our own energy system allegedly can be harmonized and balanced in a sound bath. But there is of course also the audible aspect of sound: The gong, for instance, has so many frequencies that the brain cannot interpret the information and hence surrenders and gets into a relaxed state – similar to listening to white noise as form of relaxation. While the scientific research in this field is only just beginning, many people are experiencing deep relaxation, better sleep and a sense of "reboot" of their system after having participated in a sound bath or gong bath. In the most common setting for a sound bath people are lying down. Here we will experience a shorter version, sitting in our chairs, relaxing. If you feel comfortable having your eyes closed, it's recommended. Enjoy!

Tina Quartey has been an influential percussionist within the Swedish folk and world music scene, as well as an intermittent teacher at Malmö Academy of Music for more than three decades. In 2017 she started to explore music as vibration and frequency in sound baths, sound art and meditative, ambient concerts. In 2020 she was awarded the prize »Tradition Bearer of the Year« at the Swedish Folk & World Music Gala, and in 2023 she received the Folk Music Prize from the Royal Swedish Academy of Music. *https://www.tinaquartey.com/*

On the occasion of the anniversary, the Sound Environment Centre has commissioned a piece by Quartey for the Sound Bench which is currently playing.

12.00–13.00 LUNCH IN THE LUX-BUILDING'S ENTRANCE HALL

13.00–14.30 PART II – TRACES

Preservation, sonic history and listening

Moderator: Phil Dodds

Researcher, Department of Arts and Cultural Sciences, Lund University

- ***What do historical sounds tell us about the past that written traces cannot? What role do sound's affective and aesthetic qualities play in historical studies? What do the sounds of the past reveal about the present? How do we attune our listening?***

James Mansell: The collecting ear

This paper makes the case for a new strand of sound studies focused on critical engagement with and undoing of the logics through which sound has been collected and classified since the nineteenth century. Museum object collections and sound archives are products of auditory power and of the Western "listening ear" but have been under used in historical sound studies. This paper will examine the emergence of an ethnographic "listening ear" in late nineteenth century museum object collecting practices, critiquing its entanglement with histories of race and colonialism.

James G. Mansell is Professor of Cultural History and Sound Studies and Deputy Head of the Department of Cultural, Media and Visual Studies at the University of Nottingham, UK. He is the author of *The Age of Noise in Britain: Hearing Modernity* (2017) and co-editor, with S. K. Groth, of *Negotiating Noise: Across Spaces, Places and Disciplines* (2021). He is co-lead of the project 'Musical Affordances and Counterfactuals' (2024-25) which is creating a new 'museum concert' for the Science Museum, London, with the contemporary music ensemble Icebreaker and the composers Sarah Angliss, Gavin Bryars, and Shiva Feshareki.

Marie Cronqvist: The acoustemology of sirens. A century of urban communication infrastructures of fear and public sonic warnings in Sweden

This paper focuses on the empirical case of the Swedish public warning system and its sociotechnical embedding over the last century until today. Listening into the field of sound studies with its rich scholarship on sound engagement, historical soundscapes, auditory and listening cultures and emotions, and sound spatialities, the aim of the paper is to outline theoretical entries within a newly initiated pan-Scandinavian research project on urban soundscapes of fear and security. While scholars such as Goodman (2012), Daughtry (2015) and Bull (2023) have addressed some aspects of present-day

sonic violence, warfare and conflict, the longer histories of soundscapes of fear – and especially its positioning in urban everyday life – are still largely an unchartered field of inquiry. Connecting the concept of "acoustemology" (Feld 1992) and with history of knowledge ("Wissensgeschichte"), defining sonic experiences as a way of knowing, the presentation discusses the technological and infrastructural affordances of knowing, feeling and practicing the testing of outdoor sirens in different urban settings at different times throughout the postwar era.

Marie Cronqvist is Professor of Modern History at the Department of Culture and Society (IKOS), Linköping University, Sweden. Her research expertise is media history and Cold War culture. Recent publications include *Media Tactics in the Long Twentieth Century* (Routledge, 2024, co-edited with F. Mohammadi Norén and E. Stjernholm. Cronqvist is PI of the interdisciplinary project *Soundscapes of Warning: The Past, Present and Futures of VMA (Important Public Announcement)*, financed by the Swedish Research Council (VR) since 2024. *https://sonicwarnings.wordpress.com*

Jacek Smolicki: Transversal listening

This multimodal presentation builds on several of the author's artistic projects aimed at rethinking the practice of soundwalking. By conceptually and practically deploying the concept of transversality, these projects sought to complicate the dominant function of soundwalking as a vehicle for innocent immersion in the immediate environment. Instead, their aim was to offer alternatives for careful navigation through our soundscapes and consideration of their dense histories and vulnerable futures. Drawing on soundwalks taken and offered in, for example, the Pacific Northwest, the Nordic Arctic Circle, Canaveral National Seashore, and Walden Pond area, the presentation explores how transversally rewired soundwalking might aid a relational approach to environments, rendering listening as a force capable of recognizing intricate resonances and dissonances between their different scales, temporalities, and actors.

Jacek Smolicki, PhD, is an interdisciplinary artist, researcher and educator. His work explores temporal, existential and technological dimensions of listening, recording and archiving practices in human and more-than-human contexts. He is affiliated with Uppsala University and works across multiple ecotones between academic and non-academic realms. *www.smolicki.com*

14.30–15.00 COFFEE OUTSIDE THE LECTURE HALL (C121)

15.00–16.00 PART III – MATTER

Sound studies of the non-human

Moderator: Caroline Isaksson

Professor, Ecological and Evolutionary Physiology, Dept. of Biology, Lund University

- ***How should we consider sound in relation to sustainability and biodiversity? What effect do sound and noise have on the environment? Is there a way out of this? How can research into this field be designed to embrace a multifaceted understanding of these issues?***

Katharina Riebel: Shifting views on sex-specific acoustic communication in songbirds

Birdsong is a prominent feature of many soundscapes. Well audible to humans, its often melodious complexity has fascinated laymen, artist and scientist across the ages and cultures. In biology, song has mostly been studied as a predominantly male signal functioning to attract mates of the opposite sex and to exclude same sex competitors. This view is shifting on several accounts. There is increasing documentation of female birdsong but also of male and female song in non-breeding related contexts. Recent surveys and phylogenetic analyses show that female birdsong is widespread and that the ancestors of the modern songbirds most likely had male and female song. This is changing the questions we ask about birdsong. I will highlight a few of the new hypotheses this has generated regarding the evolution of the pronounced variation in sex differences across songbird species.

Katharina Riebel is Associate Professor of Behavioural Biology, University of Leiden. Her interest in birdsong started when completing her biology studies at the Free University in Berlin with a project on memory, recall and behavioural control in nightingale song. Pursuing her interests in animal cogniton and communication, she investigated the development and function of individual and context variation in chaffinch song at St Andrews University in Scotland during her PhD. In this context, understanding receivers' perspectives in birdsong quickly led to an interest in culturally transmitted female song preferences after moving to Leiden University in the Netherlands. Documenting and understanding the pronounced variation in male and female song learning strategies and singing behaviour have been her prime research interests since.

Josefin Starkhammar: Marine mammals and sound: why sound and noise in water matter

Water is an effective medium for transmitting sound due to its high sound velocity – 4.5 times faster than in air – and its low acoustic absorption. The vertical water columns in

seas and lakes are also smaller than the air column in the atmosphere, making water an excellent waveguide for sound, including noise. For instance, blue whales can generate low-frequency sounds that travel up to 1,600 km. By studying marine animals' use of sound, we can better understand the impact of anthropogenic noise on underwater ecosystems. Toothed whales, reliant on echolocation for feeding, navigation, and social interaction, are particularly vulnerable. If their ability to use high-precision sound is compromised, they risk starvation. Thus, human-made noise profoundly affects these animals' survival. Entanglement in gillnets is another high risk for toothed whales, threatening several species with extinction. However, this should be possible to avoid by using echolocation-detectable gillnets, requiring quiet environments.

Josefin Starkhammar is Associate Professor at the Faculty of Engineering, Lund University. With a background in engineering physics, she studies the echolocation of toothed whales from various interdisciplinary perspectives, integrating physical and acoustical insights with cognitive aspects and exploring potential biomimetic and engineering applications. A recent research contribution is the discovery of features in dolphin echolocation that potentially enable them to instantly sense prey speed. Her current research focuses on echolocation generation and beam formation properties of dolphin tissues. Additionally, Josefin is deputy coordinator of the Lund node for the strategic research area eSSENCE, covering various e-science disciplines.

16.00–16.15 REFRESHMENTS OUTSIDE THE LECTURE HALL (C121)

16.15–17.45 PART IV–POLITICS

Fictions and imaginaries of sound

Moderator: Robert Willim

Associate Professor, Department of Arts and Cultural Sciences, Lund University

- ***What role can sound play in sustaining and inspiring democratic visions for the future? What is a politics of sound? Who is to define it? Who is listening? Is anyone speaking?***

Paul Hegarty: Layering the global and the local

This presentation is an attempt to think through what it is that predominantly Western/global North sound studies is or are doing when rethinking the relation of the global and the local. I will suggest that even as we correctly seek to decolonise the study of sound and/or music, that there are twin risks of re-essentialising the local (and as a result not continuing to question the global) and of believing that we have finally found the paternalist holy grail of a good listening practice. The idea of the "glocal" is one

way people have tried to form limited compromises between the scales of geographical identity, but does it undo either universalism of a place or of the world as place (of globalisation)? I think that often it does not. Perhaps there are multiple layers jointly implicated in today's sound-world that complicate simplistic notions of colonial-capitalist universality versus "proper" local sonic identities, and without this perhaps we miss crucial details in 21st century globalisation. I propose to use Benjamin Bratton's model of informational globalisation, "the stack", along with a consideration of apparently peripheral parts of French sonic culture (for example, the Indian ocean island of La Réunion, which is technically part of France) to think about directions of travel.

Paul Hegarty is Professor of French and Francophone Studies at the University of Nottingham. His research focusses on experimental music and art, along with considerations of sound cultures. His current projects include a book, *Smooth*, on easy listening and ubiquitous music, due in 2025; ideas of Francosonia, on the not-yet-postcolonial sounds of French-identified locations. He continues to write on noise and performs with Romain Perrot in the groups Maginot and Damp Misery. He is currently curating a series of Japanese concerts in tandem with Café Oto in London, over 2024-25, and co-curating a sound-based exhibition at Nottingham Contemporary.

Holger Schulze: Subjectivity engines for possible worlds in three sonic fictions and their politics

"Sonic fiction is an engine of subjectivity," writes Kodwo Eshun in *More Brilliant than the Sun* (1998), his groundbreaking text on sonic fiction. It is precisely this fundamentally subjective character that has inspired artists and scholars to use sonic fiction when working toward social progress, black aurality, or acid communism. This talk will present and discuss three "sonic possible worlds" (Salomé Voegelin) of political sonic fictions from sound, music, and meme culture: a pandemic fiction by sound artists Sam Auinger and Hannes Strobl from the year 2020; a nostalgic fiction by Martin R. Zeichnete a.k.a. Drew McFayden since 2013; and a sardonic fiction by creator citiesbydiana from the year 2023. How do they perform their political desires or traumas sonically?

Holger Schulze is Professor in Musicology at the University of Copenhagen and principal investigator at the Sound Studies Lab. His research moves between a cultural history of the senses, sound in popular culture and the anthropology of media. He was visiting professor at the Musashino Art University Tokyo, at the University of New South Wales Sydney, and the Humboldt-Universität zu Berlin. Currently he works on *The Bloomsbury Encyclopedia of Sound Studies* (with J. Stoever and M. Bull) and on *The Bloomsbury Handbook of Sound in Museums* (with A. Cortez, E. de Visscher and G. Rossi Rognoni). Selected publications: Sonic Fiction (2021), *The Bloomsbury Handbook of the Anthropology of Sound* (2021, ed.), *The Sonic Persona* (2018), *Sound as Popular Culture* (2016, co-ed.).

Sandra Kopljar et al.*: Sound of democracy: towards the democratisation of standards for soundscapes

In this audio paper, our aim is to illustrate how democratic values are reflected in the soundscape standards. Standards are increasingly used to categorize, govern, and control. They are also tools to assess and characterise. As policy tools they raise democratic questions relating to who developed them, when and how they are used. The application of standards is associated with a set of consequences associated with democratic values. A case in point are the standards for soundscape (e.g., ISO 12913) which attempt to standardise the human perception of acoustic environments and their analysis. An audio paper is a suitable format to elaborate on the soundscape standards from an inter-disciplinary perspective and makes it possible to apply the standards in a real-world setting. Through the urban acoustic environment in Hyllie, Sweden, including the Emporia shopping mall, we explore the democratic values reflected in the standards through their development and application.

About the authors: Over a nine-month period (2023-24), a group of nine researchers collaborated as part of an interdisciplinary team focusing on the theme "Sound of Democracy" at the Pufendorf Institute for Advanced Studies, Lund University. The central research question was to explore how everyday sound environments can support, reflect, or challenge democratic values and mechanisms within democratic states, and to examine how democratic principles are expressed in soundscapes. Democracy research often tackles questions like how power is distributed among different groups or how expert knowledge becomes accessible to the public. Sound, however, has a particularly non-conforming nature—it does not adhere to visual, legal, or ownership boundaries. The everyday experience and use of sound cross disciplinary lines, creating its own space and rules. This audio paper, a tangible result of these discussions, was previously presented at the international conference Inter-noise in Nantes, France, 2024.

*Sandra Kopljar, *Senior Lecturer, Architecture and Culture, Lund University (presenting)*
Phil Dodds, *Researcher, Department of Arts and Cultural Sciences, Lund University*
Mark Grimshaw-Aagaard, *Professor, Department Communication and Psychology, Aalborg University*
Sanne Krogh Groth, *Senior Lecturer, Department of Arts and Cultural Sciences, Lund University*
Clara Gustafsson, *Senior Lecturer, Department of Business Administration, Lund University*
Marie Højlund, *Department of Digital Design and Information Studies, Aarhus University*
Kristoffer Mattisson, *Division of Occupational and Environmental Medicine, Lund University*
Dalia Mukhtar-Landgren, *Department of Political Science, Lund University*
Enrico Ronchi, *Division of Fire Safety Engineering, Lund University*

17.45-18.00 ROUNDING OFF

18.00 RECEPTION WITH FOOD AND DRINKS IN "PERSONALMATSALEN", 2ND FLOOR

CREDIT:
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Ongoing piece on the sound bench (18/11 2024-1/3 2025)
Lament For A Strip Of Land
Composed by *Tina Quartey*
Production by *Sofia Chanfreau, Umami Produktion*
Commissioned by *The Sound Environment Centre, Lund University*

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20 Years of Sound Environments

19/11 2024, LUX:C121
Programme in brief

10.00–10.30 **Welcome**

Sound Environments: Exploring, listening, positioning
Presenter: Sanne Krogh Groth

10.30–12.00 **PART I – Reverberation**

Ethics, health and the physical condition of individuals exposed to sound
Presenters: Mette Sørensen, Stefania Serafin, Tina Quartey
Moderator: Kristoffer Mattisson

12.00–13.00 **Lunch in LUX entrance hall**

13.00–14.30 **PART II – Traces**

Preservation, sonic history and listening
Presenters: James Mansell, Marie Cronqvist, Jacek Smolicki.
Moderator: Phil Dodds

14.30–15.00 **Coffee outside the lecture hall (C121)**

15.00–16.00 **PART III – Matter**

Sound studies of the non-human
Presenters: Katharina Riebel, Josefin Starkhammar
Moderator: Caroline Isaksson

16.00–16.15 **Refreshment outside the lecture hall (C121)**

16.15–17.45 **PART IV – Politics**

Fictions and imaginaries of sound
Presenters: Paul Hegarty, Holger Schulze, Sandra Kopljar
Moderator: Robert Willim

17.45–18.00 **Rounding off**

18.00 **Reception with food and drinks in "Personalmatsalen".**

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