Sonic Skills Public Day

Friday January 17, 2014

Groote Societeit, Vrijthof 36, 6211 LE, Maastricht

On January 17-18, 2014, a group of Sound Studies experts will come together at Maastricht University to comment on the Sonic Skills project, a project that studies sound and listening as entrances for acquiring knowledge in twentieth-century science, engineering and medicine. The meeting will start with a Public Day on Friday January 17, during which several of the experts will present their own research on cultures of sound and listening, past and present, in short and accessible English language presentations.

Aleks Kolkowski (London), Julia Kursell (University of Amsterdam), Cyrus Mody (Rice University), Rachel Mundy (Pittsburgh University), Trevor Pinch (Cornell University), Tom Rice (Exeter University), Sophia Roosth (Harvard University) and Axel Volmar (Siegen University) will talk about the fascinating sonic features of museum collections, physiology labs, research reform, audio bird guides, circuit bending, prison life, underground infrasound and high-end audio. They will draw on Arts and Musicology, as well as on Science and Technology Studies, History of Science and Anthropology. The day will end with a short podcast on the Sonic Skills project, accompanied with slide show images. The Sonic Skills project team includes Karin Bijsterveld, Joeri Bruyninckx, Melissa Van Drie, Anna Harris, Stefan Krebs and Alexandra Supper, most of whom are affiliated with the Faculty of Arts & Social Sciences, Maastricht University.

This day is open to anyone interested. A simple lunch will be served, and entrance is free. As the lecture room (see upper left image) is a nineteenth century salon with a limited number of seats, registration is required by sending an email to Lidwien Hollanders: l.hollanders@maastrichtuniversity.nl. In case you know beforehand that you will only be able to attend either the morning program or one of two afternoon sessions, please inform Mrs. Hollanders about this, so that we can accommodate as many participants as possible.

Program

10:30-10:50 Registration and Coffee

10:50-11:00 Opening & Introduction by Karin Bijsterveld

11:00-11:30 Trevor Pinch—*Sector Two: The Sounds of Broken Circuits*

11:30-12:00 Julia Kursell—*Ear and Instrument: Concepts of Hearing in 19th-century Physiology*

12:00-12:30 Tom Rice—*Sounds from Inside: Listening to Prison Life*

12:30-13:30 Lunch Break

13:30-14:00 Aleks Kolkowski—*Hearing Artefacts: Revealing Incarcerated Sounds within Museum Collections*

14:00-14:30 Axel Volmar—*The 'Cold' Sound of Digital Recording: Early Reception of the CD-Player in High-End Audio Culture*

14:30-15:00 Rachel Mundy—*Museums of Sound: Audio Bird Guides and the Pleasures of Knowledge*

15:00-15:30 Tea Break

15:30-16:00 Sophia Roosth—*Infrasound Underground: Listening to the Vibratory World*

16:00-16:30 Cyrus Mody—*Synesthesia in the Seventies: Research Reform and the Senses*

16:30-17:00 Karin Bijsterveld, Joeri Bruyninckx, Melissa Van Drie, Anna Harris & Alexandra Supper—*Sonic Skills in Sounds and Images* & Closing Remarks

17:00 & after Drinks!

Abstracts and Bios

Trevor Pinch—*Sector Two: The Sounds of Broken Circuits*
In the early 1970s at the dawn of electronic music I could not afford to buy an electronic music synthesizer such as made by commercial manufacturers (e.g. Moog). I wanted a synthesizer badly! So I got some circuits from a hobbyist magazine and built my own synthesizer (see http://www.youtube.com/watch?v=WJ8hIih_wN0). Over the years this synthesizer has been repaired, modified and even repainted (by my 20-year old daughter). New faults have developed as components have aged. Today I still play this synthesizer in musical performances. My band mates love it especially when it goes wrong – demanding more of one particularly broken module known to them fondly as "Sector Two". Audiences gather round the synth after shows – the synth becomes in effect a kind of star with its own "aura". In this talk I will set my own experiences playing this synth within the wider context of the movement known as "circuit bending" where electronic music artists and hobbyists modify old electronic toys to make sounds they find interesting. Why should old, often broken technologies be of such interest? What sorts of sounds do broken technologies produce? What does it mean to be "broken"?

Trevor Pinch is Goldwin Smith Professor of Science and Technology Studies at Cornell University. He holds degrees in physics and sociology. He has authored many books and numerous articles on aspects of the sociology of science, the sociology of technology, the sociology of economics, and sound studies. His books include Analog Days: The Invention and Impact of the Moog Synthesizer He is also a performing musician with the Electric Golem and Atomic Forces.

Julia Kursell—*Ear and Instrument: Concepts of Hearing in 19th-century Physiology*
Research about our hearing has often modeled the functions of the ear after the instruments that produce sound. Names such as "eardrum", "tuba Eustachii", but also the idea that the ear could be compared to a harp, a cembalo or a piano, speak of this role of musical instruments. In my talk I claim that in the mid-nineteenth century, physiology became conscious of this role of musical instruments and began to ask how hearing relates to the way in which musical sounds are produced. Using the example of Hermann von Helmholtz's theory of hearing, I will discuss how hearing has been reconsidered in terms of a mutual relation between the human sensory organ and the instruments and tools that humans create to produce sounds. With this I hope to contribute to a reflection on the role of contemporary media for the ways in which we conceive of hearing today.

Julia Kursell is professor of musicology at the University of Amsterdam. Before coming to Amsterdam, she worked as research fellow at the Max Planck Institute for the History of Science, Berlin. Her research interests include the history of the physiology and psychology of

hearing, as well as the relation between music, media and technology in Western composition after 1945. She published widely in these areas in journals such as *Configurations*, *Greyroom*, and *OASE*. Most recently, the volume *Music, Sound, and the Laboratory*, co-edited with A. Hui and M. W. Jackson, has come out with Chicago University Press.

Tom Rice—*Sounds from Inside: Listening to Prison Life*

While the sound environments of prisons are dependent on prison age, design and regime type, and while sound levels may vary considerably within the same institution over the course of a day, prisons in general have been described as noisy places. This is hardly surprising, as where large numbers of people are held in close proximity to one another (and sometimes even in overcrowded conditions) in buildings with reverberant corridors and other spaces, noise is inevitable. Indeed, noise has been identified as contributing to unhealthy and stressful conditions in prisons. At the same time, sounds such as the slamming of doors or the clanging of gates are now well established as sonic symbols of imprisonment and echo through our popular imagination of prison life. In the UK, 'banged up', the slang term for being locked up in a cell, is a reference to the sound of a slammed cell door, which seems to sonically reinforce or accent a prisoner's incarceration. In this presentation I introduce my preliminary research into prisoners' experiences of sounds inside, drawing on prison writings to develop a sense of how inmates hear their environment and using Sound Studies literature to create analysis of their accounts.

Tom Rice is an anthropologist specialising in auditory culture and works in particular on the sound environments of institutions. He recently published a book on his research entitled *Hearing and the Hospital: sound, listening, knowledge and experience* (Sean Kingston Publishing). As well as writing and teaching on sound, he has produced audio pieces including a documentary for BBC Radio 4 about the relationship between music and water entitled *The Art of Water Music*.

Aleks Kolkowski—*Hearing Artefacts: Revealing Incarcerated Sounds within Museum Collections*

Conservation practices regarding historical artefacts in museum collections are primarily concerned with preserving an object as closely as possible to its original condition, with attention paid to the superficial appearance if it is destined for display. With very few exceptions, less or no concern is given to restoring or maintaining an object to perform its original function. Thus, artefacts which are designed for the production or reproduction of sound, be they musical or scientific, remain mute in showcases, displays and shut away in museum storage facilities and are only very rarely, if ever, played or activated. Virtual or physical reconstructions, on the other hand, while being an important means of representation, are no substitute for the real thing. This talk will examine some recent projects I have

undertaken involving recordings, performances, reconstruction and installation work centred upon the sounding of artefacts from the vast collections of the London Science Museum, as well as an attempt to create a sonic map of the Museum building in South Kensington.

Aleksander Kolkowski is a violinist, composer and researcher, who for many years has explored the potential of historical sound recording and reproduction technology and obsolete media to make contemporary mechanical-acoustic music. His practice-led research in this field led to the award of a PhD from Brunel University, London. In 2012, Aleks was appointed as the first ever Sound Artist-in-Residence at the London Science Museum. He is currently a Research Associate at the Royal College of Music. http://www.phonographies.org/

Axel Volmar—*The "Cold" Sound of Digital Recording: Early Reception of the CD-Player in High-End Audio Culture*

In 1982, the Compact Disc was released to international markets. While, at first, music lovers enthusiastically welcomed the CD for its technological superiority over analog technologies, a controversy soon arose among audiophiles over the actual "sound" of CD players. Hifi enthusiasts especially missed the "warmth" of the analog compared to the "cold" sound of digital recordings. Drawing on journals from the high-end community, I will highlight some major themes from these debates between 1982 and 1986. At first, I will reconstruct how audio lovers negotiated a vocabulary as well as judgments on "analog" and "digital" sound. After that, I will show how manufacturers responded to the demands of the audiophiles in order to harmonize perceived experiences and verbalized expectations. The CD player was the medium with which most people had their first personal experiences with the new concept of the "digital" in everyday life. Therefore the introduction of the CD is particularly interesting for scholars of STS since it helps us understand how the rather abstract and then new categories of the "analog" and the "digital" were filled with cultural meaning by auditory practices and negotiations.

Axel Volmar is a teaching fellow in Media Studies at the University of Siegen, Germany. Currently he is a member of the international research network "Auditory Knowledge in Transition" (*Hör-Wissen im Wandel*) funded by the German Research Foundation. His dissertation, *Sound Experiments*, explores the auditory culture of science after 1800. He has co-edited volumes on auditory media cultures and the cultural history of data sonification. Recent publications include: "Listening to the Cold War: The Nuclear Test Ban Negotiations, Seismology, and Psychoacoustics 1958-1963," *Osiris* 28 (2013).

Rachel Mundy—*Museums of Sound: Audio Bird Guides and the Pleasures of Knowledge*
Since the end of the nineteenth century, birdsong has been an important subject in scientific studies of language and music. But many of the same naturalists and scholars who study birds for science also participate in a thriving commercial industry of audio field guides. Today these guides take the form of pop-up books, compact discs, iPhone apps, and handheld devices that cater to a broad community of nature-lovers. But what is the allure of these field guides, and what are they actually used for? From Simeon Pease Cheney's 1892 book *Wood Notes Wild* to Lars Svensson's interactive digital audio book *Vogelzang: 150 Vogels en Hun Geluiden* (2013), guides to birdsong have a long history of being more than educational tools. This talk discusses the role of audio bird guides as 'museums' of natural sound, virtual places in which the listener can own, examine, and enjoy the songs of another species. Exploring these sonic museums sheds new light on why we love the songs of animals, and what they can truly teach us.

Rachel Mundy is an assistant professor of musicology at the University of Pittsburgh in the United States. She studies music's role in defining species and race as cultural inventions of the twentieth century. She is currently writing *Animal Musicalities*, a book tracing animal vocalization research from the 1870s to the twenty-first century. Her work speaks to broader questions about how the arts and sciences define what it means to be fully human.

Sophia Roosth—*Infrasound Underground: Listening to the Vibratory World*
"Infrasound" designates acoustic energy whose frequency is too low to be audible to human ears (below 20 Hz). Arrays of microphones and hydrophones have been used since the mid-twentieth century to record infrasonic rumblings, which are time compressed or pitch shifted to bring these within the range of human hearing. Since the Cold War, infrasound has been used to monitor aboveground nuclear testing and, more recently, compliance with the Comprehensive Nuclear Test-Ban Treaty. This talk tunes into infrasound's acoustemology, examining how researchers think of infrasounds as distinctive signatures of unique sonic ecologies both atmospheric (aurora, calving icebergs, earthquakes, tsunami) and constructed (airplanes, space shuttles, nuclear weapons). Citing the strange behavior some animals exhibit prior to extreme weather events, researchers suggest that infrasonic arrays might similarly be used to warn them about impending natural disasters. I argue that researchers understand infrasound as a liminal and synaesthetic sense, a subacoustic mode of forecasting and uncertainty that is unheard yet palpable. To that end, I turn to reports that infrasound triggers human feelings of unease, fear, and anxiety, as for example in the disputed "wind turbine syndrome" and research into whether standing infrasonic waves might account for sensations associated with ghostly hauntings.

Sophia Roosth's research focuses on the contemporary life sciences. Her first book, *Synthetic*, examines how biology is changing at a moment when researchers build new living systems in

order to investigate how life works. She is an assistant professor in the Department of the History of Science at Harvard University and currently a fellow of the Radcliffe Institute for Advanced Study. Recent publications have appeared in *Critical Inquiry*, *Representations*, *American Anthropologist* and *Science in Context.*

Cyrus Mody—*Synesthesia in the Seventies: Research Reform and the Senses*
The late 1960s and early 1970s were a dire period for American engineering and physical scientists due to declining research budgets and increasing public disenchantment with disciplines seen as tied to the Vietnam war. To diversify their funding portfolios, while also ameliorating their image problem, these scientists and engineers formed far-reaching interdisciplinary collaborations, particularly with the life sciences and the humanities. A curiously large proportion of these interdisciplinary collaborations involved conversions of signals associated with one of the senses (sound, light, vibration, etc.) into those associated with a different sense – a synesthetic conversion. Many such interdisciplinary collaborations aimed to construct various disability technologies – hearing aids, tactile reading aids for the blind, a tactile audio system for blind audiophiles, etc. Many other synesthetic collaborations opened up new forms of art, particularly in electronic music. Here, I survey a number of these synesthetic collaborations, mostly in California, and argue that they should be seen as links between the short-lived research reform agenda and the more durable human potential and libertarian technophile movements.

Cyrus C.M. Mody is an assistant professor in the History Department at Rice University in Houston. Apart from his research in sound studies, he primarily works on the history of the engineering and physical sciences in the United States in the late and post-Cold War eras. He is the author of *Instrumental Community: Probe Microscopy and the Path to Nanotechnology* (MIT, 2011).

Karin Bijsterveld, Joeri Bruyninckx, Melissa Van Drie, Anna Harris & Alexandra Supper—*Sonic Skills in Sounds and Images*
The Sonic Skills team members will present a short illustrated podcast about their project on the history of sound and listening in science, engineering and medicine. The members have published or will soon publish on the Sonic Skills project in *Social Studies of Science*, *The Senses & Society*, *Technology & Culture*, the *Oxford Handbook of Sound Studies* (Oxford UP, ed. by Trevor Pinch & Karin Bijsterveld), *Sonic Interaction Design* (MIT, ed. by Karmen Franinovic and Stefania Serafin), and several other edited volumes. Supper and Bruyninckx both graduated with distinction, on *Lobbying for the Ear: The Public Fascination with and Academic Legitimacy of the Sonification of Scientific Data* (2012) and *Sound Science: Recording and Listening in the Biology of Bird Song, 1880-1980* (2013) respectively.