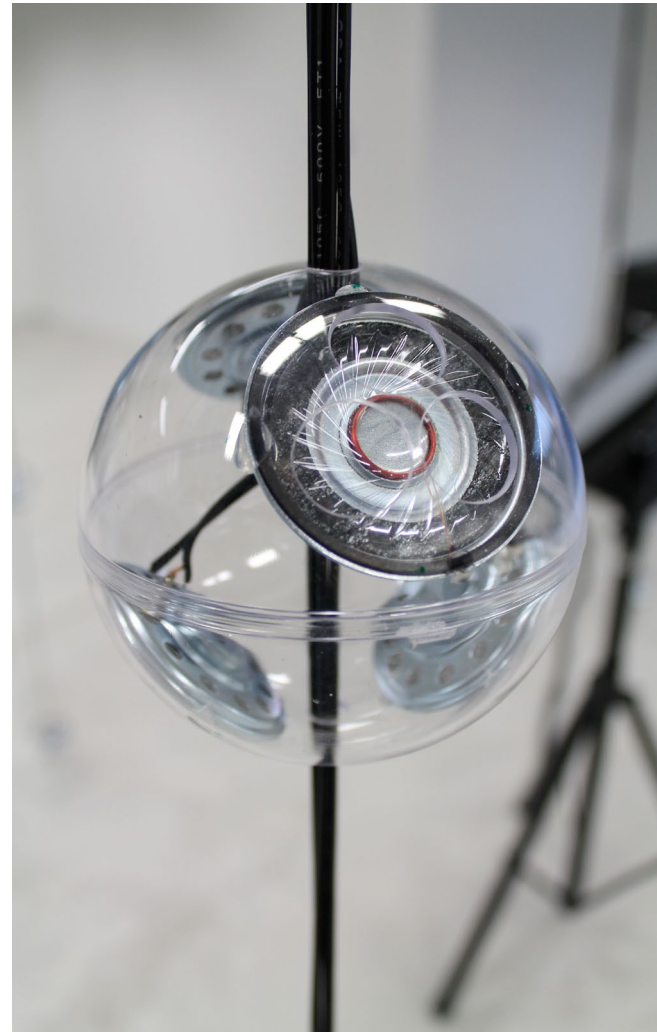






trees: Pinus sylvestris, spatial audio version, Creative City, Zurich University of the Arts ZHdK, October 2014

Detail views



trees: Pinus sylvestris, stereo version, SoundReasons festival, Outset India, New Delhi, October/November 2014

trees: Pinus sylvestris

Spatial audio/stereo sound installations
2014

The link between trees and various climatic processes is usually not immediately apparent. Trees and plants do not live merely on moisture from rain, sunlight and nutrients from the soil: they absorb carbon dioxide from the air and produce the oxygen that we breathe, maintaining our climate and biosphere. Hence the importance of conducting scientific as well as artistic research to explore the complex relationship between tree physiology and our climate and of producing an acoustic and artistic representation of the ecophysiological processes in trees. Rendering audible the way in which water transport and trunk diameter, for example, are influenced by sunlight, humidity and wind allows us to identify and understand plants' responses to climatic processes.

Plant physiologists have known that plants emit sounds for several decades now. Many of these sounds are of transpiratory/hydraulic origin and are therefore related to the circulation of water and air within the plant as part of the transpiration process. The frequencies of these acoustic emissions lie partly in the ultrasonic range, depending on the species-specific characteristics of the plant tissues.

Some of the acoustic emissions are indications of embolism in the water transport system, which occurs when a plant is subjected to drought stress and desiccation. The excessive water tension in the water-conducting system leads to the rupture of the water columns in the plant vessels.

Each plant species — in fact each plant individual — has its own acoustic signature, related to its structure and to the local climatic conditions. Investigating the

acoustic emissions of a tree in response to dynamically changing climatic conditions might reveal biological or physical properties that place them in a broader ecophysiological context and enable us to explain processes that are not yet fully understood.

Various artistic projects have subjected plant sounds to an artistic investigation with a view to revealing a world that is normally inaudible. Our project (which is situated between the domains of artistic research and natural science) examines the aesthetic means of illustrating phenomena in nature but also aims to generate new knowledge through exploration using artistic and sound technology tools, systems and practices.

Some of the ecophysiological and meteorological phenomena do not manifest themselves acoustically, and we developed metaphorical sounds to portray single phenomena, such as sunlight or air humidity effectively. The sound installation is based on a combination of different data sonification techniques, i.e. playback of original acoustic emission recordings and parameter mapping sonification, whereby the sound parameters of a sample player (amplitude, pitch and filters) and the sound distribution system (spatial position or movements of virtual sound sources) are controlled by the data flow. The different sonification modules are implemented in a software which replays the measurement data of a Scots pine (*Pinus sylvestris*) throughout an entire growth cycle.

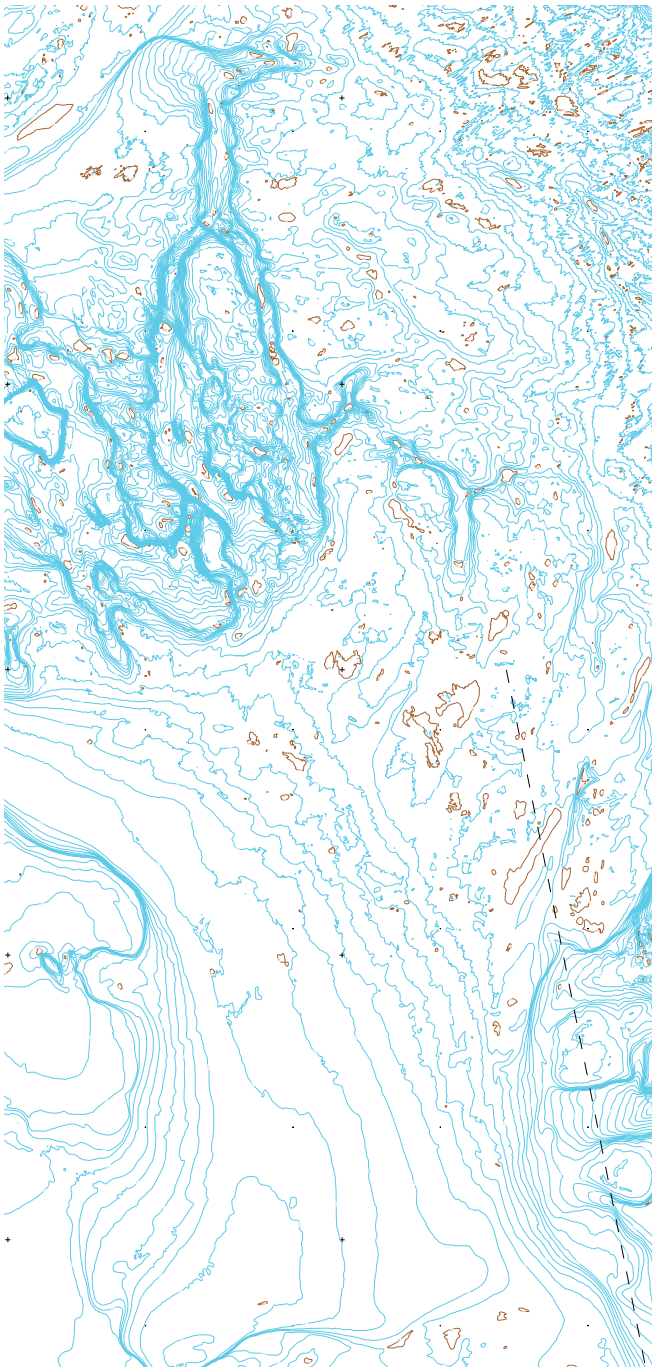
„trees: Rendering ecophysiological process audible“ is a research project conducted by the Institute for Computer Music and Sound Technology ICST of the Zurich University of the Arts ZHdK, in collaboration with the Swiss Federal Institute for Forest, Snow and Landscape Research WSL. „trees“ is funded by the Swiss National Science Foundation (SNSF) and the Zurich University of the Arts ZHdK.

Artistic realization and programming: Marcus Maeder
Scientific data and analysis: Roman Zweifel (WSL)
Programming support: Philippe Kocher (ICST)
Technical engineering field measurements: Jonas Meyer (ICST, decentlab)

<http://blog.zhdk.ch/marcusmaeder>
http://www.zhdk.ch/index.php?id=icst_trees_e
http://www.wsl.ch/fe/walddynamik/projekte/trees/index_EN

Exhibitions:

Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Birmensdorf
September – December 2014
—
ICMC SMC 2014 Conference, Athens
National Museum of Contemporary Art, Athens
September 2014
—
Creative City
Zurich University of the Arts ZHdK
25.10.2014
—
SoundReasons Festival, New Delhi, India
Outset India
31.10.2014 – 10.11.2014



topographie sinusoïdale

CD, domizil 38, 2013

Topography usually means the description of objects on the face of the earth, landscapes with mountains, valleys, plains, rivers, lakes. The spatial properties of these objects can be shown with contour lines representing elevations and depths. The graphical representation of these properties on paper involves a metaphorical process, although the form being depicted is directly recognizable in its representation. We draw on similar devices when we think or speak about music. For example, we describe how we perceive sounds or how a piece of music affects us referring to different modes of perception; tactile (a sharp or soft dissonance), taste (a sweet melody), visual (bright D major), emotional (a sad song) etc. There is in fact no talking about music without use of metaphors. Among these, spatial comparisons are particularly important; in fact, they are such deeply rooted concepts that we mostly do not perceive them as metaphorical at all. While it seems natural to us to speak of high or low notes, this seemingly most basic of descriptions actually contains a double metaphor: the spatial description high-low stands for the position of a note in musical notation, this diastematic notation is itself a metaphor for a physical phenomenon: fast and slow oscillation.

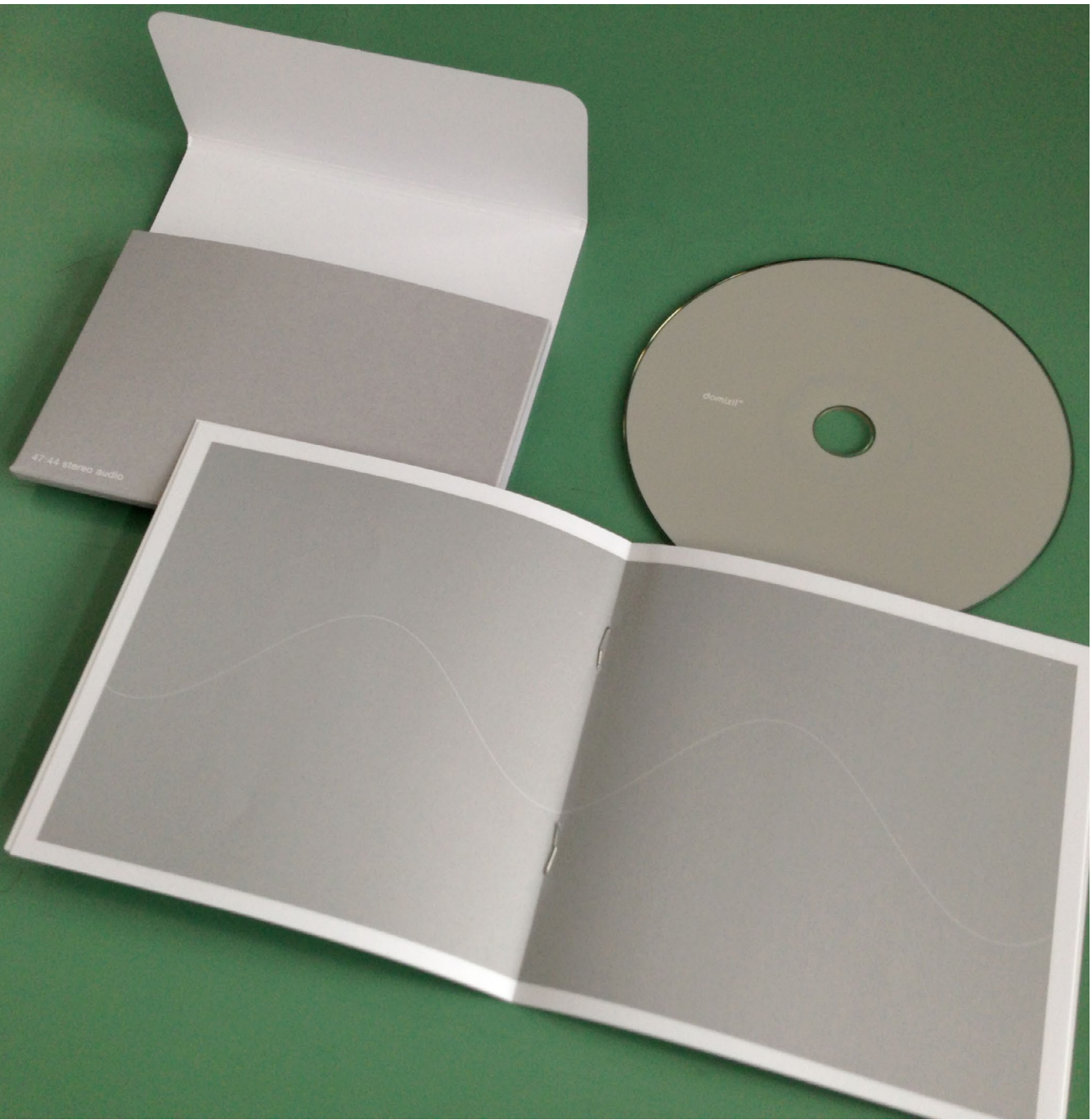
If spatial metaphors are so important for our thinking and speaking about music, it would seem obvious that such figures of thought can, conversely, serve as important devices in composition and likely produce strong associations with listeners. How will we as listeners, trained to detect spatial information in acoustic phenomena, react to music that speaks to our associative reception capabilities at a very deep level?

This is how I hear topographie sinusoïdale (and, needless to say, it can be heard in many different ways): a constantly changing landscape of sine tones, opening up and defining three-dimensional spaces. The sounds, which Maeder first took from his ever-growing collection of sound material, heterogeneous at first, are processed in different ways (extreme deceleration, spectral smoothing and tracing etc.). They appear as if arranged in space, defining upper and lower boundaries of spatial objects, cliffs, edges, slow passages from one scene to another, at times focusing on details of a larger group of objects. The organization of sound events on the time axis, the overall formal structure, is determined mainly by changes in density of events, by different pitch and by harmonic configurations. Although the association of a journey through different landscapes is a rather obvious one given the title, each listener will imagine his or her own world or have completely different associations altogether. In this sense, the listener is as involved creatively as the composer, performing his or her own creative act while listening. This is also helped by the relatively slow sequence of images. Such openness is an essential feature of the composition. As a composer, Maeder does not want to control any aspect of the ways in which his works are listened to. Moreover, chance should also play an important role when the synthetic sounds of the composition and the real sounds of the environment finally mix, creating a unique version of the piece. The composed sounds may also live in the background and simply blend into the acoustic environment. topographie sinusoïdale does not have to be played in the foreground and, accordingly, Marcus Maeder would not have it played in a predefined public concert space or as an installation. This is also reflected in

the choice of the Compact disc as a medium (by no means a mandatory or even obvious choice nowadays) best suited for private, individual listening. Thus, these remarks are to be understood as a personal account of a journey that will be complemented by every listener's own creative experience.
Lucas Bennett

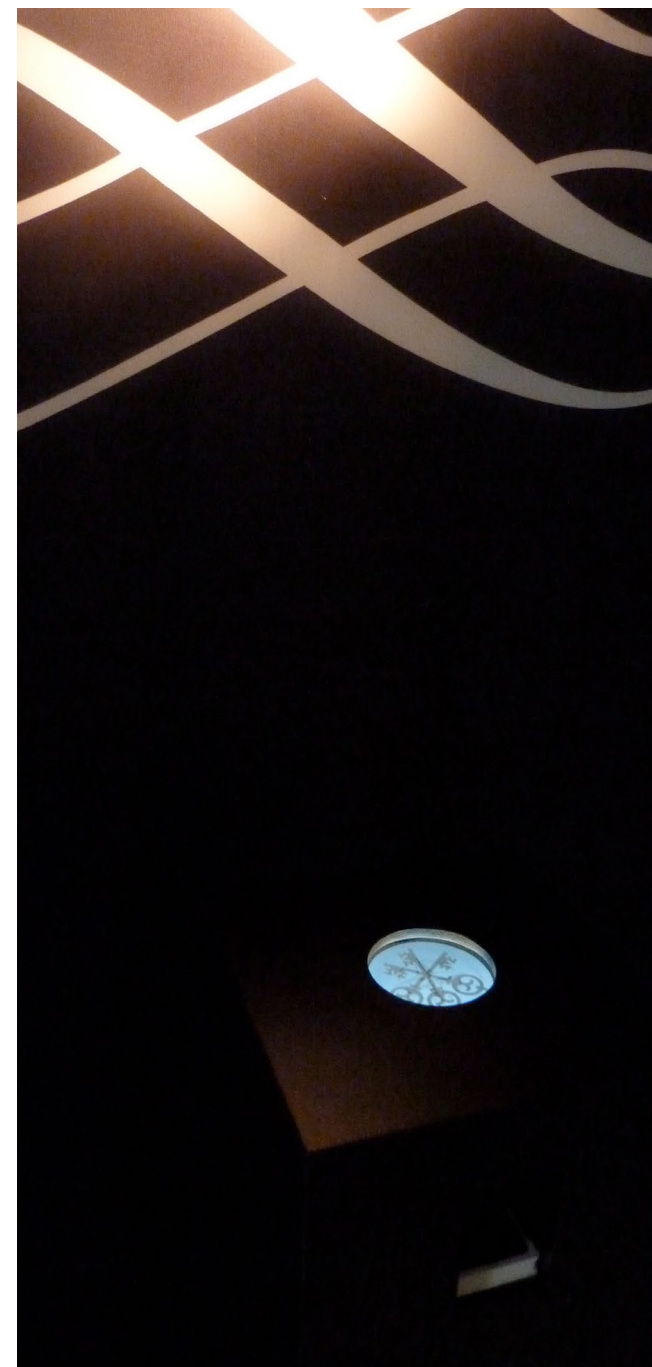
www.domizil.ch/maeder.html
www.domizil.ch/releases/d38/topographie_sinusiodale_excerpt10min.mp3
www.marcusmaeder.net

Available on iTunes, Spotify, Amazon, Google Play





Exhibition poster for The Left-Hand Path, Graz and Zurich 2011



Left: Base station/installation at Shedhalle Zurich. Right: Visitors at the Old Botanical Gardens, Zurich – Lange Nacht der Museen 2011



On the way with smartphone and installed App, Stadtpark Graz, 2011

Der Pfad zur linken Hand (The Left-Hand Path)

A GPS-based audio play app for Smartphones
2011

Graz Path: First showing at Steirischer Herbst,
Musikprotokoll, Schlossberg/Stadtpark, Graz, 2011

Zurich Path: First showing as a contribution to
„Connect. Art between Media and Reality“, an exhibi-
tion with media art from the Sitemapping programme
(BAK), Shedhalle Zurich/Alter Botanischer Garten,
2011

Direction, Text, Music:
Marcus Maeder

Interactivity, Software, Music:
Jan Schacher aka. “jasch”

The topographical audio play *The Left-Hand Path* was developed as a Smartphone app and is available for download free of charge on our project website and from the Apple App Store. We set up The Left-Hand Path in 2011 as a GPS-based audio play at the Old Botanical Gardens in Zurich as part of the „Connect“ exhibition at Shedhalle Zürich and at Graz Stadtpark for the Musikprotokoll programme of the Styrian Autumn festival. Equipped with smartphones, headphones and this app – specially developed for this project – visitors are invited to wander around and explore a designated area, where they will come across various sound clips situated at different locations throughout the landscape.

The concept of the Left-Hand Path stems from Indian mythology and denotes religious and worldly practices opposed to the prevailing homogenous, established beliefs. In the West, the term is used to describe ways of thinking involving opposing views: on the Left-Hand

Path, one often finds the devil himself as a travelling companion. Listeners of the GPS-based audio play The Left-Hand Path are led along paths of thought characterized by a fundamental opposition of the state of affairs in a „post-everything“ society, a society in which social and ecological progress risks stalling as a result of the establishment of global neo-feudal power structures.

Following the economic and terrorist crises of recent years, conservative thinking seems to be reinstating itself around the world: Right-wing politics and the associated exclusionary attitudes that characterize the wealth gap, be it on the basis of national or ethnic identity or religious belief, are becoming acceptable once again. A renaissance of conservative and religious promises of salvation is drowning out rational discussions on how we wish to lead our lives and how society should evolve in both the West and the East, in rural and in urban areas. Today, we live in a society dominated by monetary relationships and ridden with myths to the point of becoming a veritable jungle; a society in which power, money and faith are intertwined – (post-)post-modern, global capitalism has become the vast motley painting of everything that has ever been believed painted by Gilles Deleuze and Félix Guattari.

The question as to what today's enlightenment processes should look like – referring to the processes for raising awareness in society with a view to exposing and dismantling the existing power structures – requires an urgent answer. The Left-Hand Path system is associated with a diabolic figure, which manifests itself as enlightenment in its purest form, as an antagonist, as a rebel and as symbol of polemic and failure, urging listeners, in specific terms, quite simply to challenge the established ways of thinking, as Kant put it in his maxim Sapere aude! Have courage

to use your own reason! On the Left-Hand Path, several fundamental enlightenment-seeking questions arise: What society do we live in? Are we content with our current way of life? How can we determine our own destiny? In the audio play, these questions are posed by individuals characterised by having an oppositional attitude towards their environment: artists, radicals, intellectuals, sectarian gurus, alcoholics, the exploited and supporters of an alternative society. The Left-Hand Path is like a maze: a broad range of views are expressed, but which lines of thought lead out of dead ends? Can listeners find their way out of this maze of thought?

Production: ORF Kunstradio and Musikprotokoll im Steirischen Herbst Graz, Austria
Editor: Elisabeth Zimmermann
Directors Musikprotokoll im Steirischen Herbst Graz: Susanna Niedermayr, Frank Zimmer

Supported by the Swiss Arts Council Pro Helvetia, Sitemapping of the Swiss Federal Office of Culture, SRF Swiss Radio and Television, Ethnographic Museum of the University of Zurich. Project Partners: HTC (Smartphones) and Holding Graz Schlossberglift-Service.

www.derpfadzurlinkenhand.net
http://kunstradio.at/2011B/02_10_11.html
<http://www.shedhalle.ch/de/marcus-maeder-jan-schacher-der-pfad-zur-linken-hand>



trees: Downy Oak

Spatial audio/stereo sound installations
2012/2014

“Phytoacoustics”

Plant physiologists have known that plants emit sounds for several decades now. Many of these sounds are of transpiratory/hydraulic origin and are therefore related to the circulation of water and air within the plant as part of the transpiration process. The frequencies of these acoustic emissions lie mostly in the ultrasonic range, depending on the species-specific characteristics of the plant tissues. Some of the acoustic emissions (so-called cavitation pulses) are indications of embolism in the water transport system, which occurs when a plant is subjected to drought stress and desiccation. The excessive water tension in the water-conducting system leads to the rupture of the water columns in the plant vessels. Each plant species – in fact each plant individual – has its own acoustic signature, related to its structure and to the local climatic conditions.

Sonification of ecophysiological data

Gathering ecophysiological data (i.e. conducting measurements of the local climatic and environmental conditions and of the physiological processes within a plant in response to these) has become an important method in research on climate change and vegetation dynamics. It helps to determine physiological thresholds of plants in terms of increasing temperature and consequently drought stress. A downy oak (*Quercus pubescens*) in the central Alps, for example, is able to withstand the current climatic conditions of the air and soil whereas a Scots pine (*Pinus sylvestris*) is pushed beyond its physiological limits despite the

fact that both tree species have coexisted there for thousands of years. Consequently, shifts in the abundance of tree species are observed, and the ecophysiological knowledge acquired explains the underlying processes.

In this installation, we have combined field recordings of meteorological phenomena, recordings of acoustic emissions in a tree and acoustic representations (sonifications) of ecophysiological data, collected by Roman Zweifel (WSL) and Fabienne Zeugin of the Swiss Federal Institute of Technology (ETH) on a downy oak at Salgesch in the Swiss mountains in 2003 and 2004. Zweifel and Zeugin measured relative air humidity, sap flow, stem radius changes and ultrasonic acoustic emissions (UAE) throughout an entire tree growth cycle and recorded the data at ten-minute intervals throughout the day and night. As the data relating to the ecophysiological processes was multidimensional, an analytical system is needed that focuses on the key factors and the interrelations between these and renders them intuitively perceptible.

Downy Oak: Data sonification

The sonification system is based on a combination of different sonification techniques, i.e. playback of original acoustic emission recordings (by transposing them into the audible domain) and parameter mapping sonification, whereby the sound parameters of a sample player (amplitude, pitch and filters) and the sound distribution system (spatial position or movements of virtual sound sources) are controlled by the data flow. The different sonification modules are implemented in a set of Max Patches, which replays the measurement data of a downy oak throughout an entire growth cycle (April-October 2004). A larger number of ecophysiological and meteorological phenomena do not manifest themselves acoustically, and it is a challen-

ging task to generate metaphorical sounds to portray a single phenomenon, such as sunlight or air humidity effectively. Besides the diurnal course of the tree's response to sunlight, there are many other recognizable patterns: As it gets drier in the summer, the cavitation events become longer, sometimes lasting deep into the night; the stressed plant needs more time to refill with water from the soil. In addition, the number of cavitation sounds is greater when a plant is well drained and exposed to full sunlight than in very dry periods.

Artistic realization and programming: Marcus Maeder (ICST)
Scientific data and analysis: Roman Zweifel (WSL), Fabienne Zeugin (ETH)
Programming support: Philippe Kocher (ICST)
Technical engineering field measurements: Jonas Meyer (ICST, decentlab)

www.swissnexsanfrancisco.org/event/tuningintrees/
<http://blog.zhdk.ch/downyoak/>

Exhibitions:

Baum/Mensch/Klang/Kunst
Alpen Adria University, Klagenfurt
May – June 2014

—
swissnex San Francisco
Juli – August 2012

Left: trees: Downy oak – spatial audio version at swissnex San Francisco, 2012. Right: trees: Downy oak – stereo version at Alpen Adria University, Klagenfurt 2014



Milieux Sonores – sound and imaginary space. An exhibition at Grey Area Foundaten, San Francisco, 2010.



Exhibition detail: „Flow Space“ by Daniel Bisig, Jan Schacher and Martin Neukom



Exhibition architecture with detail of „Mutmassliche Windlasten“ by Yves Netzhammer and Bernd Schurer

Milieux Sonores: Sound and imaginary space

Exhibitions and book project, 2009/2010

—
Edited and curated by Marcus Maeder
—

Version 1.0 of the Milieux Sonores exhibition took place at Kunstraum Walcheturm from 16. 1. 2009 – 21. 2. 2009. Version 2.0 from 11. 9. – 19. 11. 2010 at Gray Area Foundation for the Arts, San Francisco, in collaboration with swissnex San Francisco and the support of the Swiss Arts Council Pro Helvetia.

Participating artists: Daniel Bisig/Jan Schacher/Martin Neukom, Jason Kahn, Yves Netzhammer/Bernd Schurer, Felix Profos, Jeroen Strijbos/Rob van Rijwsijk a. o.

Contributors to the Milieux Sonores publication: Daniel Bisig, Sabine Gebhardt Fink, Marcus Maeder, Yves Netzhammer, Martin Neukom, Mathias Oechsli, Nils Röller

The exhibition

The so-called „spatial turn“, the „topological turn“, has since the end of the eighties been a topic of cultural and social studies. Topological termini are broadly used in disciplines that deal with systems, entreties or groups of elements influencing each other. More recently, physical, social, geographical, psychological or physiological structures have been described using spatial categories; the concept of space has always served to define relations between things in our imagination, thus interpreting reality. According to Japanese philosopher Kitaro Nishida, space can be seen as a place that absorbs ideas and allows the expansion of our thinking to be grasped in linguistic terms.

Without any doubt, reasons for this stronger emphasis on the spatial aspect can be found in the increasingly important role spatially oriented media plays in our living environment. Whether it is the simulation of space used in almost every computer game, GPS navigation systems or space metaphors in the internet such as chat rooms: the large share of virtuality structured in analogy to space is defining of our discourse on the world. Furthermore, through recent media technology, a veritable topos of media related experience and acting is taking on form, an ontology of the virtual is in the making. With cinema, DVDs and computer games the spatial design of sound and the sonic design of space has gained importance. Surround technologies allow to simulate complex acoustical spaces: the „virtual“ acoustic space has become a widely discussed subject. If we view the fields of media and sound art, of electronic music, of game and sound design from such a perspective, it is striking that especially in these disciplines, topological terms become parameters in artistic and medial work. Furthermore, sounds do not only exist in a spatial relationship to one another, they are on a level of imagination and creation part of a consciously generated sonic and spatial milieu.

If we understand artificially generated sound spaces as fields of imagination that are composed of sound milieus structured in space and time, they are nonetheless primarily composed of technically generated signals that trigger sensations. The producer's as well as the artist's and the recipient's imagination through acoustic sensations creates a space for association which brings into relation our knowledge about the real world and the simulation of the possible. Under the influence of our perception's expansion brought about by media technology, the conception of reality begins to change. Space simulations created by artists, be it in films, in installations or musical works,

create „hyper-natural“, surreal spaces of experience that are filled with strange sound objects, impossible or remote spaces, sounding artificial life forms – they create mental landscapes which become part of our environment. On this phenomenon, Gilles Deleuze and Félix Guattari noted in the dawn of the computer age: „The real is not impossible, but it becomes more and more artificial.“

In the exhibition Milieux Sonores, we focused on artistic and musical designs of sound spaces, on working with sound and the visualization of imaginary space. Milieux Sonores presented five different artistic approaches, each of which either creates, in its own unique way, a world of sounds and a space for a framework of sounds or transforms and redefines space through sound. Two of the five works were developed at the music department of the Zurich University of the Arts, namely Vier Nebenräume by Felix Profos and Flow Space by Daniel Bisig, Martin Neukom and Jan Schacher from the Institute for Computer Music and Sound Technology.

The book

Milieux Sonores/Klangliche Milieus

Sound, Space and Virtuality

The idea for this book came up during preparations for the Milieux Sonores exposition. Inspired by the numerous reactions of a very interested public, the contributions in this book aim to reflect the multi-faceted aspects of sound and the acoustic space within the current discussion of virtuality. The examination of musical methods and practices in the virtual sphere as a veritable intersection of research and art has only just begun.

If we understand artificially generated sound spaces as fields of imagination that are composed of sound milieus structured in space and time, they are nonetheless primarily composed of technically generated signals that trigger sensations. The producer's as well as the artist's and the recipient's imagination through acoustic sensations creates a space for association which brings into relation our knowledge about the real world and the simulation of the possible. Under the influence of our perception's expansion brought about by media technology, the conception of reality begins to change. Space simulations created by artists, be it in films, in installations or musical works, create „hyper-natural“, surreal spaces of experience that are filled with strange sound objects, impossible or remote spaces, sounding artificial life forms – they create mental landscapes which become part of our environment. This approach comes close to a long held dream of surrealists. Leading surrealist thinker André Breton wrote in his first surrealist manifesto back in 1924: “I believe in the future resolution of these two states – outwardly so contradictory – which are dream and reality, into a sort of absolute reality, a surreality, so to speak. I am aiming for its conquest, certain that I myself shall not attain it, but too indifferent to my death not to calculate the joys of such possession.”

Editor: Marcus Maeder, Institute for Computer Music and Sound Technology, Zurich University of the Arts (ZHdK)
Publisher: Transcript Verlag, Bielefeld
Authors: Daniel Bisig, Sabine Gebhardt Fink, Marcus Maeder, Yves Netzhammer, Martin Neukom, Mathias Oechslin and Nils Röllner
Publication: July 2010

www.transcript-verlag.de/ts1313/ts1313.php



Sonifications and Music for the NOVA display system 2008

NOVA is a three-dimensional screen with the capability to display dynamic visuals in three dimensions. NOVA consists of 25 000 luminescent spheres, which can be activated one by one, which are equipped by 12 light emitting diodes each. The display can show two-dimensional images as well as three-dimensional abstract content.

The NOVA of ETH Zurich served as a platform for art and science displaying algorithms from a variety of scientific departments of the ETH Zurich (Swiss Federal Institute of Technology).

A prototype of the system was been installed from 2005 until 2012 on the ceiling of Zurich's main train station, and the console was located at the group meeting point at the centre of the hall, where Maeder's sonifications and music accompanying the scientific animations and visualizations of all departments of the ETH have been broadcasted.

www.nova.ethz.ch

A video simulation:
www.domizil.ch/ETH_Boomsma_Concentration_1.mov



Presentation/installation detail of „Die Wunschmaschinen“ (The Desiring-Machines), a surround play and live installation, 2008

Die Wunschmaschinen

(The Desiring-Machines)
Surround Play/Live Installation, 2008

Based on Anti-Oedipus: Capitalism and Schizophrenia I by Gilles Deleuze and Félix Guattari. Cast: Antonin Artaud, Hélène Barat, Ivan Chtcheglov, Guy Débord, Eliza, Sigmund Freud. Music based on Kraftwerk, Velvet Underground, Nick Cave and Richard Wagner.

The desiring-machines

In the aftermath of 1968, the desiring-machines embodied the unconscious in a world fundamentally affected by technology for the philosopher Gilles Deleuze and the psychiatrist Félix Guattari. An unconscious, which is not seen as a theatre of symbolic representations – criticism belonged to psychoanalysis – but more politically understood, as a productive factory. The productive, reality-producing desires are desiring-machines; they are our desires in the interaction with the world. The desiring-machines are a critical affair: the market, the media and politics know how to use the desiring-productions; in its delimitation, psychiatry treats them as illness. The machines splutter, overheat, break down, and, again and again, break up into new structures of a schizophrenic, capitalist society, without ever having realised themselves.

One who sets off on his own in order to liberate his desiring-machines is the Schizo. We roam with him through the psychogeography of a city where he encounters others who have, in their social and creative delineation and delimitation, themselves become revolution: eccentrics, schizophrenics, artists and writers – existences on the thin line between passion and pathology.

The play is performed in acousmatic form (a loudspeaker performance/installation) using Ambisonics technology, a special surround sound system that can create three-dimensional spatial audio.

Direction, Music: Marcus Maeder. A production of the Institute for Computer Music and Sound Technology, Zurich University of the Arts, Music Department. Speakers: Sascha Gersak, Pilu Lydlow, Dagmar Gabriel, Edward Piccin, Yves Raeber, Oleg Lips, Helmut Schüschner, Jörg Reichlin. Casting, Locations, Assistant Director: Bettina Disler. Production Manager: Simon Könz. Recording Technology: Silvan Gretener, Tobias Stritt. Programming: Jan Schacher, Philippe Kocher. Ambisonic Technology: Peter Färber. Composition Studio Support: Johannes Schuett.

www.wunschmaschinen.net
<http://zhdkrecords.zhdk.ch>





.ds Davos Soundscape: Landmark of a sound segment, Davos 2007



Map of .ds Davos Soundscape



.ds – davos soundscape

A topographical composition by Jan Schacher and Marcus Maeder for the Davos Festival 2007

The experience and composition of .ds – davos soundscape emerges from the movement, peregrination and strolling of the listeners throughout the landscape of Davos and surroundings. Ten micro-computers equipped with GPS were available for rent at the Davos Tourist Office. Together with the device the visitor received a map (see image p. 13) with the proposed routes and a diagram showing the locations of sound fragments. These sound-zones or so-called “sweet spots” were placed in the landscape with a surveyor’s stake painted in a fluorescent color to mark the area where a piece of music or sound is located and to simplify the acoustic “treasure hunt”; Google Earth has been an invaluable tool and composition aid for .ds – davos soundscape.

.ds davos soundscape is based upon two concepts. The first – The Open Work – stems from Umberto Eco and is the title of one of the most influential writings about contemporary aesthetics. The text, which dates to the year 1962, defines an open work as one that doesn’t intent to convey a definite meaning to be comprehended by the audience. The creation of the work of art is much rather an act into which the perceiving individual is directly involved by assigning the work a personal meaning. In .ds davos soundscape we intend to intensify this relationship insofar as we establish a composition in the landscape whose temporal structure and sonic attributes are generated by the presence and movement of the public in a real territory.

In their seminal book *A Thousand Plateaus* the two authors – philosopher Gilles Deleuze and psychia-

trist Félix Guattari – have addressed the territoriality of sound and music in an extremely inspiring way. Their approach to the concept of the ritornello is quite unique. The term ritornello is known from baroque music: it denotes the part of a rondo that returns periodically, like a refrain during the course of the piece. Deleuze und Guattari consider the ritornello in an extended sense as the sound(track) or melody or acoustic signature that defines a natural territory. Humans and animals produce this kind of ritornello. A child that sings a song in the dark does this to block out its fear, to create through song a stabilizing centre in the “chaos” of the unknown and to establish a safe territory. Birds establish through their repeated song pattern their territory and thus build an acoustic barrier around it. The ritornello is territorial or localized and according to Deleuze and Guattari even the keys and rhythms in music are territorial and influenced by their regional provenance.

Sounds form territorial structures and from this fact originates the term ‘soundscape’: a sonic landscape. A sonic landscape consists of acoustic environments that can be traversed. They overlap, are defined and shift in relationship to each other. Sonic environments can be entered, traversed and left: this constitutes the territories – according to Deleuze and Guattari the defining of a territory is the act, the action which influences sounds and environments and territorializes them by using their specific characteristics. When the sonic and acoustic factors and components of an environment cease being functional and acquire an expressive quality they generate a territory. In .ds davos soundscape we shape the sonic environments by marking them acoustically and giving geographical elements a musical shape.

We plant a number of sound zones or acoustic markings in Davos’ landscape. Sound engineers call the

area within a loudspeaker setup, which gives the best listening result the “sweet spot”. By taking this concept into the landscape our “sweet spots” become the centers of topographical, acoustic and musical circles. We define and compose the sonic territory specifically in relationship to the characteristics present in such a zone. The starting points and basic materials for the sound of an area are located on these spots. Fascinated by the specific natural sound ambience of a place, for instance the murmuring of a brook or the geographical properties of a stretch of forest we might be inspired to compose a romantic motif of melody-loop.

.ds davos soundscape creates a composition and sonic landscape from a number of sound territories and overlapping sonic circles. By moving through the zones and areas the visitors create their own open composition. The routes proposed on the .ds map can be followed in any direction and may be experienced in shorter sections. The totality of the zones emphasizes the eclectic and sometimes contradictory character of Davos’s landscape: Davos Dorf and Platz present an urban face, the zones of Schatzalp and Weissfluhjoch show their alpine character, whereas the path around the lake and along the Landwasser river to the woods cemetery are idyllic and on a stroll in the Kurpark and along the high promenade a more cultivated experience ensues. By following the routes and zones in a personal manner, varying chronologies and superpositions of our sounds emerge and a non-linear soundtrack to a movement through the landscape is produced.

www.davosoundscape.ch

Left: Sound segments at Davos lake, Davos. Right: Visitor with microcomputer and headphones



Recurrence Plot, Helmhaus Zürich, 2005

Selected exhibtions and projects

2014

trees: Pinus sylvestris – Stereo version
SoundReasons Festival, Outset India, New Delhi

—
trees: Pinus sylvestris – Spatial audio version
Creative City, Zurich University of the Arts

—
trees: Pinus sylvestris – Stereo version
Swiss Federal Institute for Forest, Snow and Landscape Research WSL, Birmensdorf

—
trees: Downy Oak 2 –
Baum/Klang/Kunst/Mensch, an exhibition of the Alpen Adria University, Klagenfurt, with Ch. Kubisch, B. Traubeck, W. Ritsch

2012

trees: Downy Oak – Exhibition, Workshop, Symposium. swissnex San Francisco

2011

The Left-Hand Path – An interactive audio play, in collaboration with ORF Kunstradio. Zurich: Shedhalle/Old botanical garden. Graz: Musikprotokoll im Steirischen Herbst

2010

Curating of the Milieux Sonores Exhibition, Kunstraum Walcheturm, Zurich/swissnex San Francisco

2008

Die Wunschmaschinen – Surround play/Installation after Deleuze and Guattari's Anti Oedipus: Presentations at Kunstraum Walcheturm, Zurich (premiere) and the „40 years 1968“ festivities, Frankfurt

2007

Davos Soundscape – Topographical composition for the Davos Festival 2007, together with Jan Schacher

2005

Recurrence Plot – Audio installation at Helmhaus Zürich, Stipendia exhibition

2004

Transient Travels – World New Music Days 2004, Switzerland; composition and installation with Jasch, COH, AGF, Hecker and Ilios

—
Radio play for Swiss Broadcasting Corporation SRF 2: Tenderenda der Phantast by Hugo Ball with Bernd Schurer and Marc Matter.

—
Music for theatre: Migrantenstadl – Tim Zulauf, Fabriktheater, Zurich, with Bernd Schurer

2003

Participation at Electronic Music Archive, an exhibition curated by Gianni Jetzer and Norbert Möslang (Voice Crack), Kunsthalle St. Gallen

2002

Music and sound design for the national exhibition Expo.02, Expoagricole, Murten

2001

Music for theatre: Die Stelle im Park – Tim Zulauf, Theater am Neumarkt, Zurich

1998

Co-founding of the k3000 Medialab in Zurich together with musicians, artists and designers

—
We Are Somewhere Else Already – Swiss Institute, New York: Group exhibition and presentation

Viper Festival, Lucerne: Das metaphysische Kabinett, with Felix Kubin, Amus Tietchens. a. o.

—
ISEA Festival, Manchester: Revolting® Participation and presentation

1997

Hörnetz 2 [listening network]: Contemporary radio work and counter-information, Shedhalle, Zurich: Organization of workshops and conferences

1996

Co-founding of Kombirama, an independent art space.

—
Foundation of the music label domizil, with Bernd Schurer



domizil USA tour: Marcus Maeder live at LACE, Los Angeles, 2009

Selected live performances

2014
SoundReasons Festival, New Delhi, India
—
HEAD, Geneva

2013
@PTT, Geneva

2012
The Lodge, Zurich, with Michael Northam and Deer
Happy Place

Nova and Music, Zurich Main Train Station, with
Steinbrüchel, Biosphere a. o.

2010
Présences Electroniques, Geneva
with Monolake, Leila, Biosphere a. o.
—
Cabaret Voltaire, Zurich
with Asmus Tietchens, Biosphere a. o.
—

MOS ESPA, Geneva

2009
domizil USA Tour: Sonic Circuits Festival, Was-
hington; SFAI, San Francisco; LACE, Los Angeles;
swissnex ,San Francisco

Electron Festival, Geneva

2008
MMKamp 2008, Dubrovnik,

Die Wunschmaschinen, Surround Radio Play,
Malsehn, Kino, Frankfurt, „40 Years 1968“

Synthèse Festival 2008, Bourges, France
Contribution to the concert of CIME Suisse

Die Wunschmaschinen, Surround Radio Play,
Premiere, Kunstraum Walcheturm, Zurich

2007
Dorkbots Tokyo, Yokohama, Japan,
with The Interactive Swarm Orchestra

Hotel Schatzalp, Davos Festival 2007 –
with Jan Schacher

SonicDays, Fri-Art, Fribourg, with Schurer,
Steinbrüchel, Fennesz, DAT Politics a. o.

„Tenderenda der Phantast“, Cabaret Voltaire

2006
Cuba, Münster – with Schurer and Frank
Niehusman

EEI Festival, Labin, Croatia

Walcheturm, Zurich, with Jasch (Visuals) and
Ryoichi Kurokawa

2005
Unsound Festival, Krakow – with Schurer,
Steinbruchel, Günter Müller

Club 1955, Warsaw – with Schurer, Steinbruchel,
Günter Müller

2004
Horse Hospital, London
—
World New Music Days 2004, Zurich

Gare du Nord, Basel
—
La Suisse Festival, Regents Studio, London

Club Transmediale, Construction Sonor, Berlin
2003

Ausland, Berlin

Shedhalle, Zürich

Electrograph Festival, Athens – with Bernd Schurer,
Marc Behrens, Dieb 13 a. o.

2002
Domizil vs. Antifrost Tour – with Bernd Schurer,
Steinbruchel, Jason Kahn, Ilios, Coti

Ear we are Festival, Bienne - with Teleform,
Stephan Wittwer, Barre Phillips a. o.

Substrat, Zurich

Boa, Lucerne - with Dat Politics

Rote Fabrik, Zurich - with Coil

Expo.02, SonarSound, Neuchatel, with Teleform

Le Crime, Lille - with Teleform, Steinbruchel
Batofar, ...cherche la Suisse Festival, Paris

Sonar Festival, Barcelona - with Teleform a. o.

CCC Festival, Bern

LEM Festival, Barcelona

Discography

2015 progeny, Min-CD, domizil 41	2001 Poisonhats, CD, Arts Centre Dublin (Compilation)
2013 topographie sinusoïdale, CD, domizil 38	2000 Substrat, CD, Stattmusik (Compilation) — Institut für Feinmotorik: Verschiedene, CD, IFFM (Compilation)
2010 annex, Mini CD, domizil 35	1999 solipsistic_motion, 12", domizil 10
2009 subsegmental, CD, domizil 32	
2008 Die Wunschmaschinen, DVD, domizil 30/ZHdK Records	
2007 This ship in trouble, Mini CD, domizil 24	
2005 Opera Calling, CD (Compilation)	
2004 Transient Travels, VA, CD, domizil 23 (Compilation)	
2003 domizil vs. Antifrost live, - Live CD, domizil 19 (Compilation) — Club Transmediale, CD, Data Error (Compilation) La Suisse, CD, SME (Compilation) Bees & Honey, Andrey Kiritchenko, CD, Zeromoon (Remix)	
2002 Quiconque, CD, domizil 17	

Grants

2010 MediaProject: The Left-Hand Path, Sitemapping, Bundesamt für Kultur
2009 Composition comission by the Swiss Arts Council Pro Helvetia
2006 Composition comission by the Swiss Arts Council Pro Helvetia
1995 Studio grant of the Binz 39 Foundation in Scoul/Switzerland

Publications

Maeder, M. 2014. „Ambient culture: Coping musically with the environment", proceedings ICMC/SMC Conference, Athens, 2014
Maeder, M. 2014. „Der Klang der Bäume“, in: Christoph Flamm: Baum/Mensch/Klang/Kunst, Ritter Verlag, 2014
Maeder, M. and Zweifel, R. 2013. Downy Oak: Rendering Ecophysiological Processes In Plants Audible. Proceedings SMC/SMAC 2013, Stockholm, Sweden.
Maeder, M., Schacher, J. 2011. „The left Hand path“, in: Connect. Kunst zwischen Medien und Wirklichkeit, Nürnberg: Verlag für moderne Kunst, 2011
Maeder, M. 2010. „Elektronische Musik, Kunst, Pop- und Subkultur – in der Schweiz und anderswo“. In: Bruno Spoerri: Musik aus dem Nichts – Elektronische Musik in der Schweiz. Zürich: Chronos Verlag, 2010
Maeder, M. (Ed.) 2010. Milieux Sonores - Klangliche Milieus. Klang, Raum und Virtualität. Bielefeld: Transscript Verlag
Maeder, M. 2008. „Milieux Sonores“, Zett 4/08
Maeder, M. 2007. „Immersion im Möglichen“, in: Soundscapes/Hörlandschaften, Stadt Zürich
Maeder, M. and Schacher, J. 2004. „Transient Travels“, in: Trans_It, World New Music Days

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www.avataradio.net
www.thelefthandpath.net
www.wunschmaschinen.net
www.davosoundscape.ch
www.transienttravels.net
www.kombirama.ch
www.k3000.ch



Marcus Maeder

Marcus Maeder studied Art at the University of Applied Sciences and Arts of Lucerne and is currently pursuing a Master's degree in Philosophy at the University of Hagen. Maeder runs the music label domizil, which he co-founded in 1996 with Bernd Schurer. He has worked as an editor and producer for the Swiss radio station DRS and has been working as a curator and research associate at the Institute for Computer Music and Sound Technology since 2005. His artistic work focuses mainly on sound and media art, computer music and the artistic and media extensions of the term. As an author, Maeder has written on a number of topics in the fields of cultural studies, aesthetics, media philosophy, sound art and artistic research.

Die leise Symphonie der Bäume – Musik – Kultur – Schweizer Radio und Fernsehen

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Die leise Symphonie der Bäume

Mittwoch, 4. Juni 2014, 6:10 Uhr

Theresa Beyer

4

13

4 Kommentare

Sind Pflanzen einfach stumme, grüne Materie? Ganz und gar nicht: Je nach Wetter und Tageszeit rauscht, wispert und knirscht es gehörig in ihrem Inneren. Diese akustischen Fingerabdrücke interessieren nicht nur Biologen, sondern auch Klangkünstler wie Marcus Maeder.



Das Team von «Trees» erforscht, wie es im Inneren der Bäume klingt. FLICKR/DKX ELLEN

Audio
Mitte der 60er-Jahre steckte der englische Forscher John Milburn die Nadel eines Plattenspielers in den Stiel eines Rhizinusblattes. Über die Kopfhörer nahm er ganz leise wahr, dass es in dessen Innersten geheimnisvoll rauscht, flüstert und knackt.

Diese Klänge untersucht auch ein heutiges Forschungsprojekt. Es heisst «Trees: Okophysiological Prozesse hörbar machen». Zwei ganz unterschiedliche Institutionen untersuchen das akustische Innenleben der Bäume: die Zürcher Hochschule der Künste und die Eidgenössische Forschungsanstalt für Wald, Schnee und Landschaft.

Eine verkabelte Föhre

Heute fahren die Forscher allerdings schwerere Geschütze auf als Milburn vor 50 Jahren: Am Stamm ihres Probanden – es ist eine Waldföhre im Wallis – wimmelnd es nur so von Geräten: Von Akustiksensoren über Saftflussensensoren bis zu Dendrometern, welche die Veränderungen im Stammdurchmesser ermitteln.

Sonntag, 9. November 2014 / Nr. 45 Zentralschweiz am Sonntag

Die Bäume wachsen hören

NATUR Geräusche im Baum sollen verraten, wie er wächst und wie er auf Sonnenschein, Kälte, Trockenheit und weitere Einflüsse reagiert. Ein Biologe und ein Klangkünstler suchen einen neuen Zugang zur Natur.

MARTINA HUBER
mhuber@zentralschweiz.ch

Ein Knacken in untergeklärten Abständen, nicht immer gleich hoch, nicht immer gleich laut: Das Geräusch, mit dem sich der Botaniker Roman Zweifel seit mehr als einem Jahrzehnt beschäftigt, klingt ein bisschen wie Popcorn, das in der heissen Pfanne aufplatzt. Mit Hitze hat es denn auch zu tun, und mit Trockenheit: Es entsteht nämlich, wenn in einem Baum plötzlich die feinen Wasserläden abreißen, die dicht unter seiner Rinde von den Wurzeln bis in die Blätter führen – sei dies, weil das Wasser bei starker Sonneneinstrahlung schneller verdunstet, als es aus den Wurzeln nachfließen kann, oder weil im Boden nicht genügend Nässe vorhanden ist, die der Baum in seine Blätter befördern könnte. Bereits in den 1960er Jahren haben Forschende das Phänomen beschrieben, das seither in der Fachwelt als «Kavitation» bekannt ist.

Roman Zweifel arbeitet an der Eidgenössischen Forschungsanstalt für Wald, Schnee und Landschaft und möchte mit Hilfe dieser und weiterer Geräusche besser verstehen, welche Prozesse innerhalb eines Baumes ablaufen, wie genau er Wasser und Nährstoffe transportiert, wie er wächst, wie er atmet. Und auch, wie er auf seine Umwelt reagiert, auf Schwankungen im Wetter, auf Veränderungen des Klimas. Im Wallis beobachten wir in den letzten Jahrzehnten, dass Waldhöhen vermehrt absterben und teilweise von Flaumeichen verdrängt werden», sagt er. Laut Zweifel haben zwar bereits verschiedene Studien gezeigt, dass dies eine Reaktion der Bäume auf das Klima ist, das in den letzten 30 Jahren wärmer und trockener geworden ist. «Wissenschaftlich sind aber viele Details noch nicht genügend verstanden.»

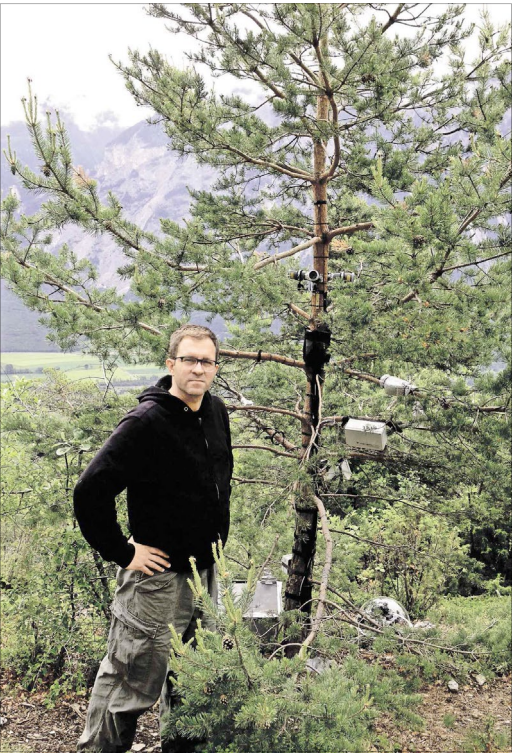
Geflüster im Ultraschallbereich
Im Herbstsommer 2003 hat der Forscher an Bäumen im Wallis erstmals selbst Kavitationsgeräusche gemessen. Sehr starke sogar – aber gehört hat er sie damals noch nicht, denn sie sind in einem so hohen Frequenzbereich, dass das menschliche Ohr sie nicht wahrnehmen kann. So hat er die feinen Schwingungen, die er mit Ultraschallsensoren an der Baumoberfläche mass, als Zahlenreihen und Kurven auf dem Computer ausgewertet. Dort hat er sie auch in Beziehung gesetzt mit klassischen Messwerten wie Temperatur, Sonneneinstrahlung, Luft- und Bodenfeuchtigkeit, Saftfluss und Baumdurchmesser – denn die Baumringe ohne ihren Kontext zu interpretieren, sei unmöglich.

Kavitationsgeräusche habe er bereits damals zweifelsfrei identifizieren können, weil sie verglichen mit anderen Baumgeräuschen ziemlich laut seien. Doch bei anderen, leiseren Geräuschen stiess Zweifel technisch an Grenzen: «Das Baumgeflüster ist extrem leise, und es gibt auch Störgeräusche, die es überhören können. Das ist um ein Vielfaches anspruchsvoller zu messen als Klimadaten wie Temperatur, Sonneneinstrahlung oder Luftfeuchtigkeit.» So habe er 2008 in einer wissenschaftlichen Publikation auch Geräusche interpretiert, die sich später als Messfehler herausgestellt hätten. «Da wusste ich: Wenn ich das seriös weiterverfolgen will, brauche ich Hilfe.»

«Wir haben viele Geräusche gefunden, die wir noch nicht erklären können.»

ROMAN ZWEIFEL,
BIOLOGE

Und diese Hilfe liess nicht lange auf sich warten: Durch Medienberichte auf das Thema aufmerksam geworden, nahm im Jahr 2009 Marcus Maeder mit Zweifel Kontakt auf, Klangkünstler und wissenschaftlicher Mitarbeiter am Institut für Computermusik und Klang-



Tonkünstler Marcus Maeder hat in Salgesch VS eine Föhre mit jeder Menge Technik bestückt, um den Baumgeräuschen auf die Spur zu kommen.
Bild: Roman Zweifel

technologie der Zürcher Hochschule der Künste. Schon beim ersten Treffen merkten die beiden, dass sie sich ideal ergänzen, und sie stellten ein gemeinsames Projekt auf die Beine.

Im Sommer 2011 führten sie an einem exponierten Standort im Wallis erste Messreihen an Walddöhren und Flaumeichen durch, mit empfindlicheren Sensoren und mit Technik, welche die Geräusche tausendfach verstärkt und in einen hörbaren Bereich transportiert.

Die Resultate waren viel versprechend: Anläufs waren viele Geräusche gefunden, die wir noch nicht erklären können», sagt Zweifel. Bzw. eine Art Knistern, das regelmässig auftaucht. Oder ein Knacken, den Kavitationsgeräuschen zum Verwechseln ähnlich, das aber nur vereinzelt und mitten in der Nacht auftritt – also dann, wenn der Baum laut gängiger Theorie ruht und kein Wasser in die Blätter hinaufsteigt.

Regen übertönt alles
Zum Trockenstress der Bäume werden die neuesten Daten allerdings nur wenig Aufschluss geben: Zu verregnet war der Sommer 2014. «Aufschlagende Regentropfen sind so laut, dass sie sämtliche Geräusche aus dem Inneren des Baumes überhören», sagt Maeder. Deshalb sollen die Messungen noch mindestens ein Jahr fortgesetzt werden. Der Klangkünstler hat Störgeräusche aber auch positiv

Prozesse hörbar machen
Ein Jahr später starteten sie gemeinsam das Projekt «Trees: okophysiological Prozesse hörbar machen», das vom Schweizerischen Nationalfonds finanziert wird. Das Ziel ist einerseits ein wissenschaftliches Erkunden, ob sich Phänomene des Klimawandels auch

Auf gleicher Wellenlänge
Und diese Hilfe liess nicht lange auf sich warten: Durch Medienberichte auf das Thema aufmerksam geworden, nahm im Jahr 2009 Marcus Maeder mit Zweifel Kontakt auf, Klangkünstler und wissenschaftlicher Mitarbeiter am Institut für Computermusik und Klang-

Kinderhusten: Auch Placebo hilft

dass Husten kann kleine Kinder und deren Eltern schnell um den Schlaf bringen. In einer Studie des Penn State College of Medicine in Philadelphia wurde ein Drittel der 120 Kinder im Alter von 2 bis 47

KALEIDOSKOP

Monaten mit Agavensirup behandelt, der ärztlich empfohlenen Alternative zu Honig. An die zweite Gruppe wurde ein karamellfarbenes Placebo mit Traubensirup ausgegeben. In der dritten Gruppe wurden die Eltern gebeten, den Husten ihrer Kinder zu ertragen. Erwartungsgemäss besserten sich Husten, Schnupfen und der Schlaf des Kindes (und der Eltern) in der dritten Gruppe am langsamsten. Die Therapie mit dem Agavensirup erwies sich in allen Endpunkten als überlegen. Die Forscher konnten aber feststellen, dass das Placebo dem Naturheilmittel praktisch ebenbürtig war.

Historische Drucke neu frei zugänglich

Über 100 000 von den rund 300 000 im Verzeichnis der im deutschen Sprachraum erschienenen Drucke des 17. Jahrhunderts sind digitalisiert. Damit stehen bedeutende Teile unseres kulturellen Erbes mit Werken aus Philosophie, Medizin, Recht und Theologie oder herausragende literarische Werke von Opitz, Gryphius oder Grimmelshausen jedem Interessierten online frei unter www.v17.de zur Verfügung. Die Transformation der in deutschen Bibliotheken aufbewahrten Drucke in digitale Form schafft die Grundlage für neue Forschungsfelder.

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Wir freuen uns über die 58 Babys, die im Monat Oktober bei uns in der Klinik das Licht der Welt erblickten. Wir dürfen vorstellen:

Giulietta Rosalba, Emma, Petar, Luan Michel, Lorin, Luca, Anja, Salma, Antonija, Hanna, Nino, Francis Patricia, Mila Valeria, Jona, Dian, Lorin, Lea Alva, Alex Benjamin, Gian, Kim, Mateo, Sarah, Jendrik, Noel Max, Anina, Lorin, Viktor Ivo, Malina Selma, Elina, Alina

Liebe Eltern, wir gratulieren herzlich und wünschen alles Gute.

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KOMPETENZ, DIE VERTRAUEN SCHAFFT



Hirslanden baby
beinhaltet: Geräusche einer Waldföhre.
www.klangzentrum.ch/baby

«Beeindruckt»: Burkhalter besucht «Milieux sonores» in San Francisco

Montag, 1. November 2010, 1:40 Uhr, Aktualisiert 07:16 Uhr

Bundesrat Didier Burkhalter hat im Rahmen seines USA-Besuchs in San Francisco die Schweizer Ausstellung «Milieux sonores» besucht. Die Klanginstallationen, die Anfang letzten Jahres in Zürich gezeigt wurden, gefielen dem Kulturminister sehr gut. Burkhalter sei von der Ausstellung «sehr beeindruckt» gewesen, sagte sein Sprecher Jean-Marc Crevoisier.



«Sehr beeindruckt» von Schweizer Kunst-Ausstellung in San Francisco: Bundesrat Didier Burkhalter.
reuters/archiv

Der kalifornische Gastauftritt der Schau wurde von der Kulturstiftung Pro Helvetia in Zusammenarbeit mit dem Wissenschaftskonsulat swissnex ermöglicht.

Werke über Klangräume

Zu sehen sind Werke der Teams Daniel Bisig/Jan Schacher/Martin Neukom, Yves Netzhammer/Bernd Schurer, Jeroen Stribos/Rob van Rijwijk sowie Jason Kahn, Felix Profos und lokalen Kunstschaffenden.

«Milieux sonores» besteht aus Klangräumen, unter anderem des gefeierten Schweizer Computerkünstlers Yves Netzhammer. Er hat zusammen mit Bernd Schurer «Mutmassliche Windlasten» entworfen, eine Installation aus einem Tisch, offenen Schubladen und klingenden Säulen, die den Inhalt der Schubladen vertonen.

Hand anlegen - auf Touchscreens

In den «Vier Nebenräumen» von Felix Profos und Silvan Gretnener lässt sich mittels zwei Trackballs durch Geräuschlandschaften navigieren. Hand anlegen - diesmal auf Touchscreens - lässt sich auch in «Flow Space» von Daniel Bisig, Martin Neukom und Jan Schacher vom Institut für Computermusik und Soundtechnologie an der Zürcher Hochschule der Künste.

Die Ausstellung gastiert noch bis zum 19. November in der Gray Foundation for the Arts (GAFFTA) in San Francisco.



A version of the audio-visual installation. Credit: Marcus Maeder
(http://blog.zhdk.ch/marcusmaeder/2014/01/05/trees-pinus-sylvestris/)

The project is a collaboration between the Institute for Computer Music and Sound Technology and Swiss Federal Institute for Forest, Snow and Landscape Research, and it is as much art as science. A surround-sound installation of tree recordings was exhibited at swissnex San Francisco in 2012 (http://blog.zhdk.ch/marcusmaeder/). If you closed your eyes standing in that thicket of microphones, you'd be transported into an auditory forest—though not necessarily a familiar one. Instead of rustling leaves or snapping twigs, you'd hear snaps, clicks, and hisses.

We don't have a whole forest, but here are the auditory emissions of a Scots pine (http://blog.zhdk.ch/marcusmaeder/files/2011/12/acoustic_emissions_pinussylv.mp3).

Trees may not leap or fly, but they're dynamic in their own quiet way. It's remarkable, if you think about it, that most of the wood's mass comes from carbon atoms a plant pulled out of the air—out of thin air! These recordings give voice to usually silent processes, reminding us of the subtle dynamism of trees. [Marcus Maeder (http://blog.zhdk.ch/marcusmaeder/acoustic-emission-detection/)]

Lead image credit: Marcus Maeder
(http://blog.zhdk.ch/marcusmaeder/2013/05/31/comparing-sensors/)

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MARCUS MAEDER - ANNEX (3"CD by Domizil)
Earlier today I was not at home, but in a friends house waiting for something. The weather was hot, and I lay down on his couch. In my bag was 'Annex' by Marcus Maeder, and I decided to play it. Around the house there was a lot of activity of people constructing a new house on one side (or perhaps putting an annex to it?) and on the other side motorized objects doing gardening work. Maeder's music wasn't very loud on, but it merged wonderful with the sounds coming from outside, even with all the windows closed. I fell asleep. Later on, now, I am at home again, listening again to 'Annex' in a more quiet surrounding of early evening (windows open). I am to understand that this work is an extension (for that is what an 'annex' is, in an architectural sense) of 'Subsegmental' (see 'Vital Weekly 702'). I am not sure if Maeder draws from the same sounds as on 'Subsegmental', but he uses 'very short sound segments reproduced at such low speed as to stretch out and form vast soundscapes' - I couldn't have this any better myself. The four pieces (sixteen minutes in total) emerge on the near silence, especially 'Plateau' is very quiet, much alike the eleven pieces on 'Subsegmental'. Perhaps without many differences between this one and that one, but its simply beautiful stuff. Maybe its too early to play this music and I should wait until full darkness has set in, but its tranquility is simply great as it is. (FdW)
Address: http://www.domizil.ch



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SOUND

audio art - experimental

Marcus Maeder - Die Wunschmaschinen

DVD - Domizil
Since the mid-nineties, the experiments of Marcus Maeder permeated the Komirama of Zurich with a certain conceptual freshness, which was both seminal and intuitive. It was at this time - for the first time - that the term 'digital culture' found its application. They were the same years in which Bernd Schurer founded Domizil Music, which now, after more than a decade, is home to this interesting project inspired by the Anti-Oedipus by Gilles Deleuze and Felix Guattari. Based on this essay, filled with premonitions on the schizophrenic process at the heart of capitalism, Maeder sketched an oblique radio play, skillfully extricated from distinctive musical elements and 'actorial' narratives (where the characters take the form of Artaud, Freud, Ivan Chotchevlov and Guy Debord). A very brilliant cast - it seems - but difficult to keep together. As if this were not enough there are also musical tributes added, ranging from Kraftwerk to Velvet Underground, from Nick Cave to Richard Wagner. A greater lack of constraint seems to add something to the sonorizations here, thanks to an eccentric synthetic 'cabaret', confined in a pathological consume of drum machines and hypnotic choruses that take shape in cyber-existential 'ballads.'

Aurelio Cianciotta

Posted at 10:08 AM - Nov 18/2009
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