

Robin Meier

As an artist and composer, I explore the emergence of natural and artificial intelligence and the role of humans in a world of machines. I try to make sense of these questions through musical compositions and installations.

Referred to as “Artist of the future” (le Monde), “Maestro of the swarm” (Nature) or simply “pathetic” (Vimeo) my work has been shown in institutions including Palais de Tokyo, Prix Fondation Ricard, Paris Museum of Modern Art, the 11th Shanghai Biennale, Art Basel, Arsenal Contemporary NYC or the Edythe and Eli Broad Museum MSU.

I am also a collaborator at the music research institute IRCAM / Centre Pompidou (Paris) since 2006 and currently a fellow at the Istituto Svizzero di Roma.

Robin Meier (1980*) in Zug CH, lives and works between Paris and Rome

education			awards			collections		
2006	Computer Music Producer at IRCAM / Centre Pompidou, Paris, F		2018/19	Fellow at Istituto Svizzero di Roma		Collection Dumas	Paris, F	
2007	Degree in Cognitive Philosophy, EHESS, Paris, F		2018	Kantonaler Kulturförderungspreis Kanton Zug		Private collections	Paris, F	
2005	Degree in Electroacoustic Composition CNR/CIRM, Nice, F		2016	Kantonaler Kulturförderungspreis Kanton Zug		Audemars Piguet	Le Brassus, CH	
	Instrumental Composition in Lucerne and Zurich CH		2016	Nomination Prix Ricard		Collection Majudia	Montreal, CA	
2003	Center for New Music & Audio Technologies (CNMAT), University of California, Berkeley, USA		2008	Kuratorium Solothurn Kulturförderungspreis				
2000	Kantonsschule Zug, CH		2007	Prix Ars Electronica, Honorary Mention				
selected solo exhibitions			selected group exhibitions					
2018	Synchronicity.	La Pop, Canal de l’Ourcq, Paris, F	2019	Synchronicity.	Istituto Svizzero, Rome, IT			
	Synchronicity.	Arsenal Contemporary, NYC, USA		Song for Ghost Travelers.	Prague Quadriennale, Prague, CZ			
2015	Song for Ghost Travelers.	FIAC Hors les murs, Gare d’Austerlitz, Paris, F		Synchronicity.	Centre d’Art Contemporain, Privas, FR			
	Fossil Records.	Galerie Laurent Mueller, Paris, F		Collective Feeding.	Colomboscope, Colombo, SL			
	Synchronicity.	Volkshaus, Art Basel, Basel, CH	2018	Synchronicity.	Biennale d’Art Numérique, Montréal, CA			
2013	Five Dreams of Nikola Lenivets.	Nikola Lenivets, RU		Synchronicity.	Illuminate, Zug, CH			
2012	A Tentative Call to the Other.	Sound Reasons, New Delhi, IN	2017	Satellite Sonata.	Story of Space Festival, Goa, IN			
2011	The Tragedy of the Commons.	Palais de Tokyo, Paris, F		Ständchen für Lev.	Sound Art Festival, Moscow, RU			
2010	Serenity and Serendipity.	Auditorio Nacional de Musica, Madrid, ES		Synchronicity.	Edyth and Eli Broad Museum, East Lansing (MI), USA			
2008	Bipperlisi.	Kuratorium Solothurn, Solothurn, CH	2016	Fossil Records.	11th Shanghai Biennale, Shanghai, PRC			
2007	Remember Me?	Artrepco Gallery, Zürich, CH		Song for Ghost Travelers.	11th Shanghai Biennale, Shanghai, PRC			
2006	Symphonie des Machines.	Sophia Antipolis, F		Synchronicity.	Kantonaler Kulturförderungspreis, Zug, CH			
2004	Caresses de Marquises.	Nuit Blanche, Gare de l’Est, Paris, F	2015	Synchronicity.	Woodstreet Galleries, Pittsburgh, USA			
selected talks			2013	Truce.	CCA, Glasgow, UK			
2018	Workshop	Ecole des Beaux Arts, Marseille, F		Human Use of Human Beings.	Festival Exit, Créteil, Paris, FR			
	Workshop	Villa Arson, Nice, F	2012	If the Lion could speak.	Domaine de la Garenne Lemot, Clisson, FR			
2017	Intelligence Animale	Université d’Eté, Château la Bourbansais, F		Truce.	Musée des Beaux Arts, Nantes, FR			
	Artist Talk	Villa Arson, Nice, F	2011	plis / replis.	Domaine Pommery, Reims, FR			
	Synchronicity	Le Fresnoy, Tourcoing, F		The Tragedy of the Commons.	Palais de Tokyo, Paris, FR			
2016	Round table	Fondation Louis Vuitton, Paris, F	2010	The Body is a Vessel.	SuperCollider Festival, Berlin, DE			
2015	Round table	Art Basel Salon Talks, Basel, CH		Truce.	Palais de Tokyo, FR			
2014	Artist Talk	Laboratorio Art & Science, Moscow, RU		A Tentative Call to the Other.	Musée d’Art Moderne de la Ville de Paris, F			
2011	Artist Talk	Universidad Autonoma de México, MX	2009	Truce.	SIGGRAPH, Yokohama, JP			
2008	Biology and AI	Musée d’Art Moderne et d’Art Contemporain, Nice, F		Truce.	Spark Fest., Minneapolis, USA			
2007	Hybrids	Ars Electronica, Linz, AT	2008	Last Manoeuvres in the Dark.	Palais de Tokyo, Paris, FR			
2005	Neural Networks in the Arts	IRCAM Centre Pompidou, F	2007	Experiments in Fish-Machine Communication.	Projet Diligence, Nice, FR			
			2004	For Alan Turing.	Festival Manca, Nice, FR			

Works

Materia Attiva

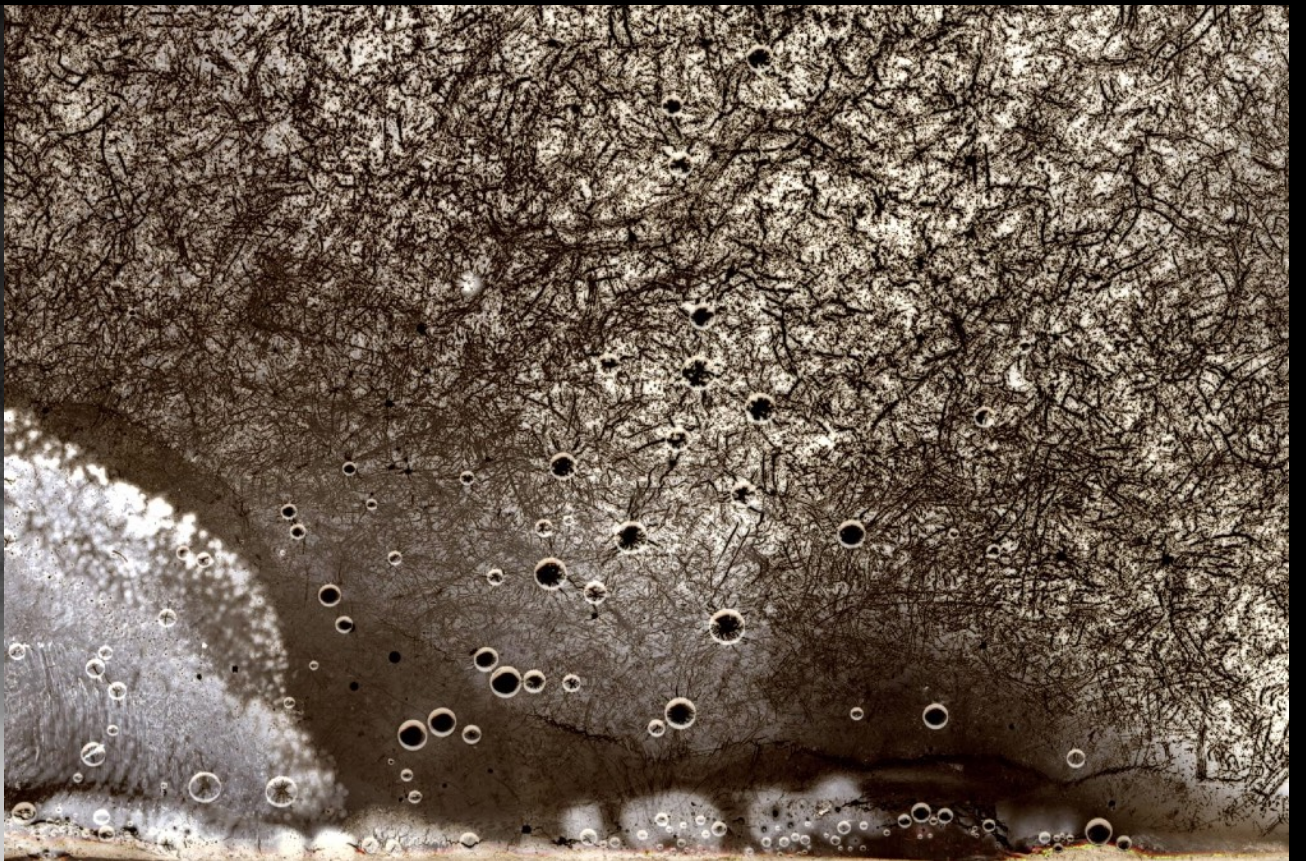


During the summer of 2017, on an expedition to the Brazilian Amazon with a team of scientists and a cameraman, we set out to interact and communicate with the collective mind of the Eciton 'Army' ants. Tracking their trails and by analysing their chemical signatures, we managed to decode the ant's pheromone language and manipulate their movements. Using resins developed with the help of an art conservationist in Sao Paulo and a technique developed by two scientists in the UK we recorded the traces of this collective manipulation onto soot covered glass sheets, which I then develop as photographic prints.

I love the fact that human genomes can be found in only about 10% percent of all the cells that occupy the mundane space I call my body; the other 90% percent of the cells are filled with the genomes of bacteria, fungi, protists, and such some of which play in a symphony necessary to my being alive at all, and some of which are hitching a ride and doing the rest of me, of us, no harm. I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. To be one is always to become with many.

Donna Haraway, *When Species Meet*, 2008





Synchronicity

VIDEO CONTENT



2015

Mixed media installation.
Mylar tent, fireflies, crickets, water circuit,
electronics.

Curated by Marc-Olivier Wahler
Produced by Audemars Piguet

Art Basel, Volkshaus Basel, 2015

Photos: Nikolai Zheludovich

Synchronicity is an installation exploring the emergence of natural cycles and synchrony inside an artificial biosphere. Live fireflies and crickets are made to flash and chirp in unison with two synchronising pendulums by manipulating the insect's behaviour through lights and sounds. Inspired by this synchrony an array of electronic devices join the chorus and start to flicker, buzz or move in sync.

"It feels like something out of a laboratory in Blade Runner that was then transplanted into a jungle with a Fitzcarraldo, who is here more of a scientist than an explorer. Artists have long understood that an artwork is much more than the sum of its parts.

A successful painting is more than an ensemble of pigments arranged on a canvas. For some time, the public has been encouraged to appreciate a work by isolating it from its context and perceiving it through the window of its gilded frame. However contemporary art has tried tirelessly to break this "window-vision." Many works integrate systems that allow for both the multiplication of relationships between parts and the formation of constantly changing surroundings. Robin Meier's artwork offers an essential contribution to this thought process. The artist harnesses the phenomenon of synchronicity at work in the organisational systems of fireflies and crickets, links these systems to communication signals emitted by metronomes and other electronic devices, and therefore creates a veritable ecosystem, based not on his own subjectivity, but on various communities that work to construct a world – an ensemble of cogs and gears – in perpetual movement."

Marc-Olivier Wahler







Synchronicity (Thailand)

VIDEO CONTENT

2015

Digital Video 4k, Stereo soundtrack.
29' - Edition of 5

Curated by Marc-Olivier Wahler
Produced by Audemars Piguet
Director of Photography: Nikolai Zheludovich;
Editing: Mariko Montpetit; Sound: Robin Meier

Art Basel, Volkshaus Basel, 2015

Photos: Nikolai Zheludovich

Video document of an experiment in the mangrove forests of Thailand. Live fireflies (*Pteroptyx malacca*) are made to synchronise their flashing with computer controlled LED's. By adjusting the speed and colour of the LED's the artists influence the speed and rhythm of thousands of flashing fireflies. Through this video they explore the idea of free will and transform a machine into a living actor inside a colony of insects.

VIDEO CONTENT



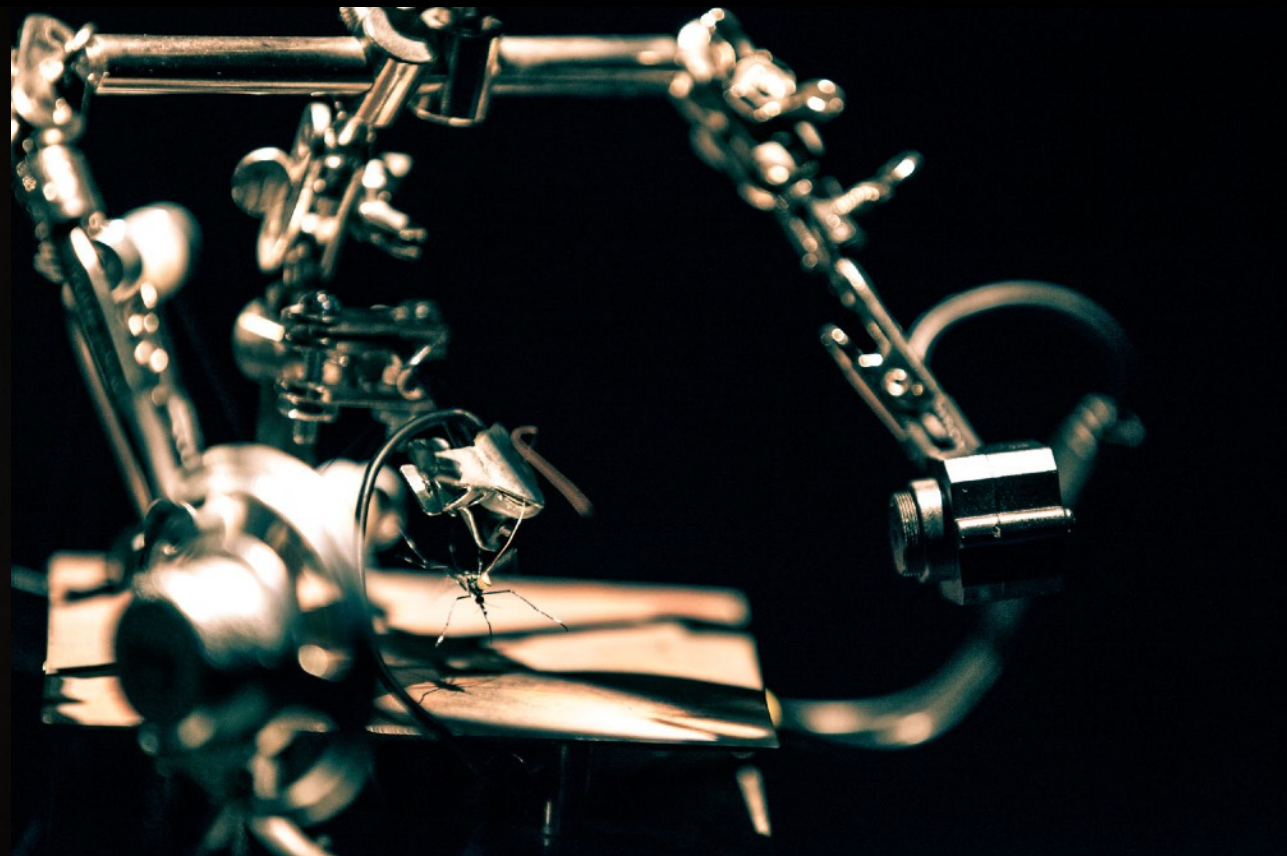


Truce : Strategies for Post- Apocalyptic Computation

In their seminal paper “Flying in Tune: Sexual recognition in mosquitoes”, Gabriella Gibson and Ian Russell from the University of Greenwich discovered an inspiring phenomenon: male mosquitoes change their buzzing frequency to match that of a female mosquito. This synchronization brings their wing beats to within a millisecond or less of one another. The authors suggest that this phenomenon facilitates the mosquitoes’ ability to copulate mid-flight. We take advantage of this phenomenon to engage the mosquitoes in song, inspired by the North Indian classical vocal tradition of Dhrupad.

VIDEO CONTENT





Collective Feeding



2011

Performance.

**2 musicians, 50 crows, birdhouses, megaphones,
rice, eggs.**

Curated by Natasha Ginwala:

Produced by Pro Helvetia New Delhi and
Colomboscope

Scientific collaborator: Kaeli Swift

Flute: Johan Peiris, Saxophone: Akeel V

Colomboscope, Colombo, 2019

Photos: Nuwan Atanayke

In 2014, Dutch authorities began to kill a small population of house crows (*corvus splendens*) near the Port of Rotterdam. The crows likely arrived from Sri Lanka around 1994 as stowaways on a commercial container boat. Apparently, international trade in a country is now understood to be the most reliable predictor of the number of introduced species found there. The house crows were all killed, except for one that found shelter in a Dutch apartment.

In January 2019, not far from Colombo Port City, we entered into contact with about 50 house crows. Every day at 5.30 pm, we performed a composition for two musicians, electronic sounds and crows. We fed rice balls and boiled eggs to the crows whilst playing the music on the roof of a cinema complex that was burned down during the 1983 Black July Riots.

Rapidly the birds learned to recognise this performance and waited for us every evening, cawing and flying in wild circles around us.

About 8 months later, on the roof of the Paris Art Lab, a motorised bird feeder starts spitting out grains as the same composition resonates from two metallic speakers. Like a mechanical psychopomp for birds, the machine calls out to the Colombo crows, temporarily modifying the habits and flight patterns for a flock of Parisian birds.

I love the fact that human genomes can be found in only about 10 percent of all the cells that occupy the mundane space I call my body; the other 90 percent of the cells are filled with the genomes of bacteria, fungi, protists, and such, some of which play in a symphony necessary to my being alive at all, and some of which are hitching a ride and doing the rest of me, of us, no harm. I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. To be one is always to become with many.

“When Species Meet”, Donna J. Haraway, 2007





Song for Ghost Travellers

VIDEO CONTENT



2015

**Performance for 3 musicians and 12 live pigeons
equipped with pigeon flutes.**

Curated by Mouna Mekouar
Produced by Gares et Connexions and Gare
de Paris Austerlitz
Pigeon trainers: A vol d'oiseau
Musicians: Ensemble Cairn

Gare Austerlitz, FIAC "hors les murs", 2015

Photo: Pitt Rivers Museum

Song for Ghost Travellers is a score for twelve pigeons and three musicians. Inspired by the Chinese tradition of attaching spherical flutes to pigeons, this performance explores ideas of chance and structure through patterns of flying birds and movements of trains inside a railway station.

Through a slight alteration the pigeon is turned into the actor of a musical score: each pigeon carries a specially tuned flute which produces a sound when the bird is flying. Following a notated score, three musicians on the ground accompany the air-bound harmonies produced by the birds and combine them with the choreography of trains in the station.





Fossil Records



2015

Steel and copper audio record, 30cm diameter,
33rpm, 10 minutes 8 seconds.

Curated by Marguerite Pilven

Galerie Laurent Mueller, Paris, 2015

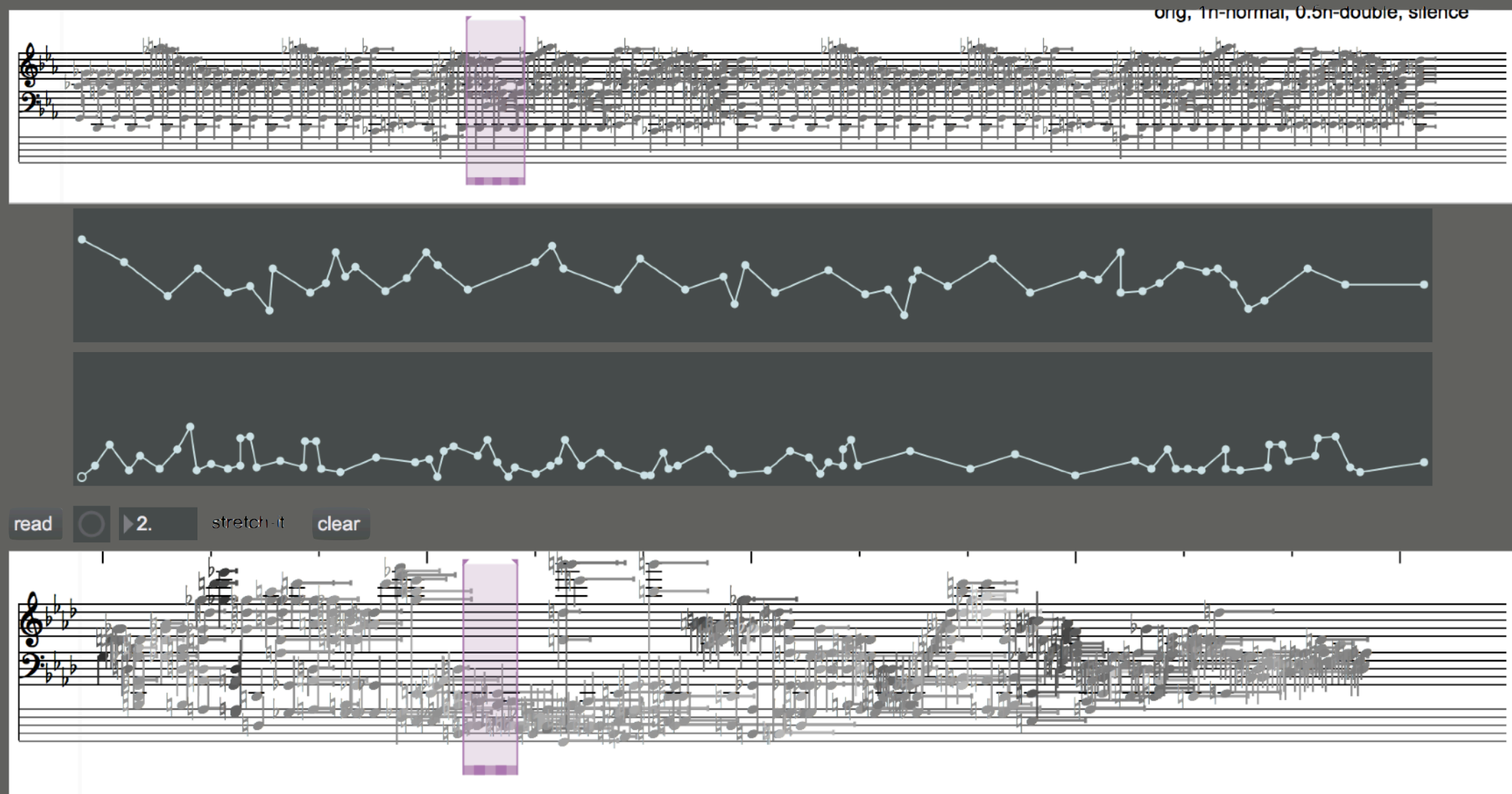
Photos : Cyrille Robin

In symmetry to the Golden Record sent into space by NASA on-board Voyager II with sounds from Earth aimed at extraterrestrial life that it may encounter several million years from today, a record plays sound from 150 million years ago created using computer-based physical modelling algorithms and analysing the physical structure of visible veins on an insect's fossilised wings.





Satie Variations



Satie Variations are a generative composition commissioned by Pierre Huyghe for a new version of his Untitled (Light Show). The composition is a custom algorithm based on recurrent neural network machine learning and is programmed to play infinite variations of Eric Satie's Gymnopédies 1 & 3.

Searching, inventing, erring and hesitating, a machine renders a broken memory of Satie's most iconic work, while the sound is modulated by the physical proximity of visitors and by climatic changes of the atmosphere outside.

Satellite Sonata

VIDEO CONTENT

2018

Performance
Meteorite, Bombay Police Orchestra

Curated by Shazeb Sheikh
Produced by Story Foundation and Pro Helvetia
Thanks to: Eric Michel (Paris
Observatory), Labenne Meteorites, Matthieu
Gounelle (Paris Museum of Natural History)
and SVARAM Pondicherry

Story of Space Festival, Goa, 2018

Photos: Douglas Gracias

Satellite Sonata was a musical encounter with 5 local musicians (Mumbai Police Band and Goa Orchestra) conducted by Santiago Lusardi-Girelli for the Story of Space Festival, an educational and artistic event in Panjim, Goa.

Through recordings, videos and workshops, we embarked on new musical territory by improvising on a score generated from satellite data, exploring contemporary playing techniques and practicing intuitive improvisations, in order to make a series of impromptu appearances in public spaces around the city of Panjim.

In parallel, a 4.5 billion year old meteorite was exhibited at the Adil Shah Gallery in Panjim, accompanied by recordings of the performances. Thanks to its vertical cuts, the meteorite also doubles as a musical instrument and can be played with a bow to produce a series of resonating tones.

"The molten core of a protoplanet, one of the earliest bodies to take shape during the formation of our solar system, hurls through space for 4.5653 billion years. After a violent collision that rips it out of the planetary disk that will eventually become our solar system, it cools down a few degrees Celsius every 100'000 years. It cools down so slowly, that its atoms interlock to form a kind of crystallised metal. It finally collides with Earth about 1 million years ago and is transported through four ice ages to the Tundra of Sweden near the Muonio river.

Using techniques perfected over years by artists such as Pinuccio Sciola in Sardinia and Svaram Musical Research in Pondicherry, this iron from the sky is made to vibrate at its very own resonant frequencies, thus giving physical form to the sounds of the stars. Meteoric iron was the first source of metal for the earliest humans to produce artefacts, such as blades or coins.

It is probably the oldest thing you will ever touch."

Exhibition Notes from Adil Shah Gallery





The Tragedy of the Commons

2011

Mixed media installation.

60'000 Atta ants, cameras, microphones, computer, flowers, fragrances, projectors, speakers.

Curated by Marc Bembekoff:

Produced by Palais de Tokyo and Pro Helvetia

Scientific collaborators: Nicolas Châline,
Laboratoire d'Éthologie Expérimentale
et Comparée, Paris

Palais de Tokyo, Paris, 2011

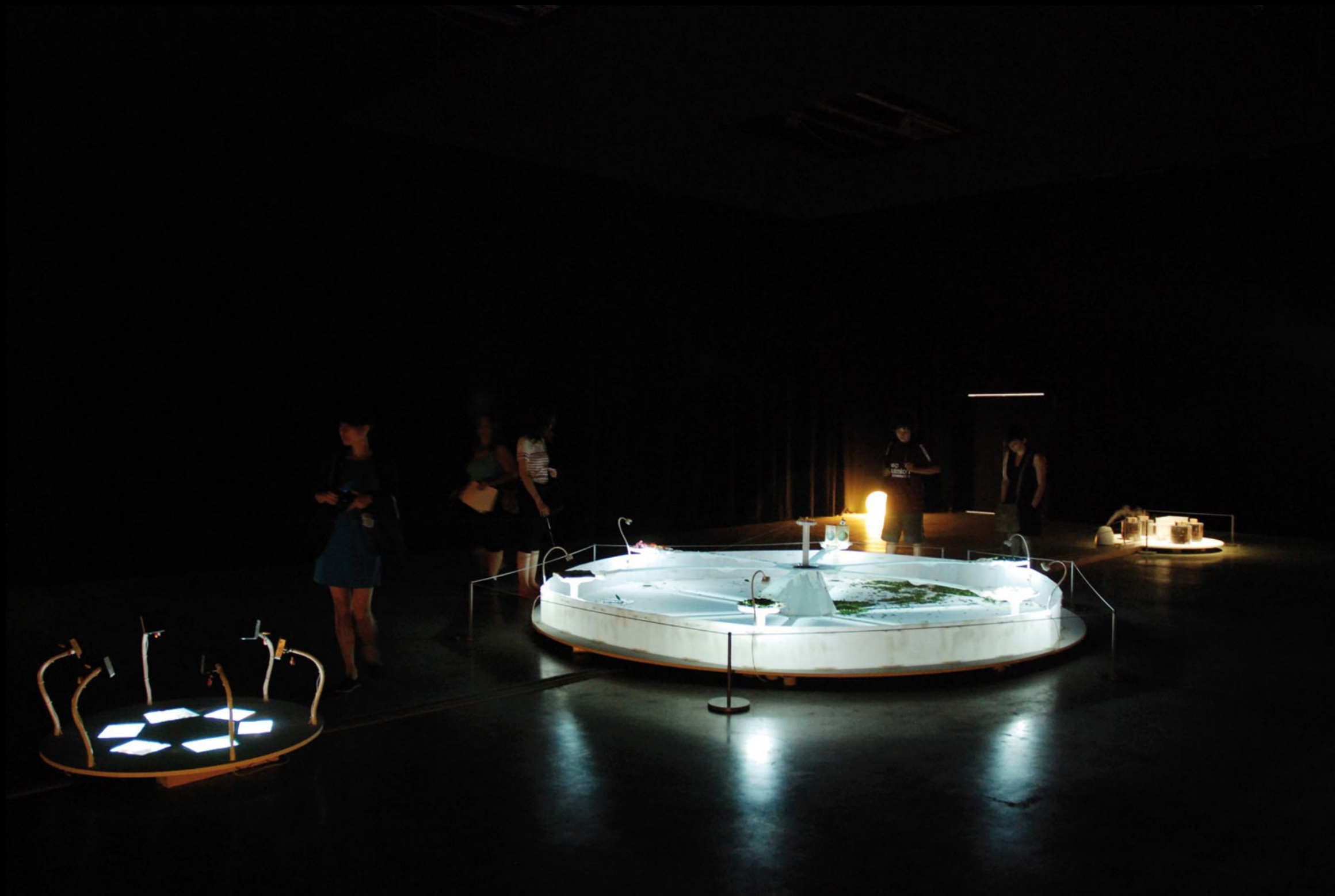
Photos: Aurélie Cenno

"The Tragedy of the Commons consists of a live experiment in the form of an installation, in which thousands of Atta ants – commonly known as leafcutter ants – create a choreography while reacting to certain flavours and smells expertly selected by Robin Meier and Ali Momeni with the help of the Laboratory of Comparative and Experimental Ethology of Paris 13 University.

Meier and Momeni have created a metaphoric 'food stock market' for the ants, since every smell or flavour available becomes merchandise capable of affecting their collective behaviour. Accordingly the two artists, who share a background in electronic and experimental music, here manage to make audible and visible a mechanism of social manipulation. On the sonic level, the amplified sound within the installation space corresponds to the ants' more or less sustained activity – which is particularly effective, grating and loud when, for example, rose petals and leaves are 'served' on the central 'platter'; for, logically enough, the more the ants are fond of a certain flavour, the more greedily they cut that certain plant within their mandibles and, accordingly, the more noise they make. On the visual level, when the central board is flooded with goods – and the insects' gleaning drastically intensified – quite stunning traffic jams occur in the tube that the ants use to bring food back to the colony.

The transition from the purely biological and ethological experiment to the social and political critical discourse is cleverly or thoughtfully supported by a few hints on paper: namely an atlas and an exchange rate (or currency) book that have been installed with the 'commons' on the central board and sprayed all over with natural scents such as orange blossom water. Inevitably the attractive smell of these two manuals leads the voracious ants to tear their pages to pieces. In this installation that evolves with a living colony, then, the symbolic mechanism of the capitalist market – which functions via the creation of demands that largely exceed the vital and primary needs of the population – manifests itself within an aesthetics of saturation, and therein appears the actual 'tragedy of the commons'."

Violaine Boutet de Monvel, Art Review, Issue 53, Oct. 2011





plis / replis

VIDEO CONTENT

2011

Media installation.
Aluminium, composite panels, speaker
membrane and lights .

Curated by Claire Staebler and Charles
Carcopino; Produced by Vranken Pommery

Domaine Pommery, Reims, 2011

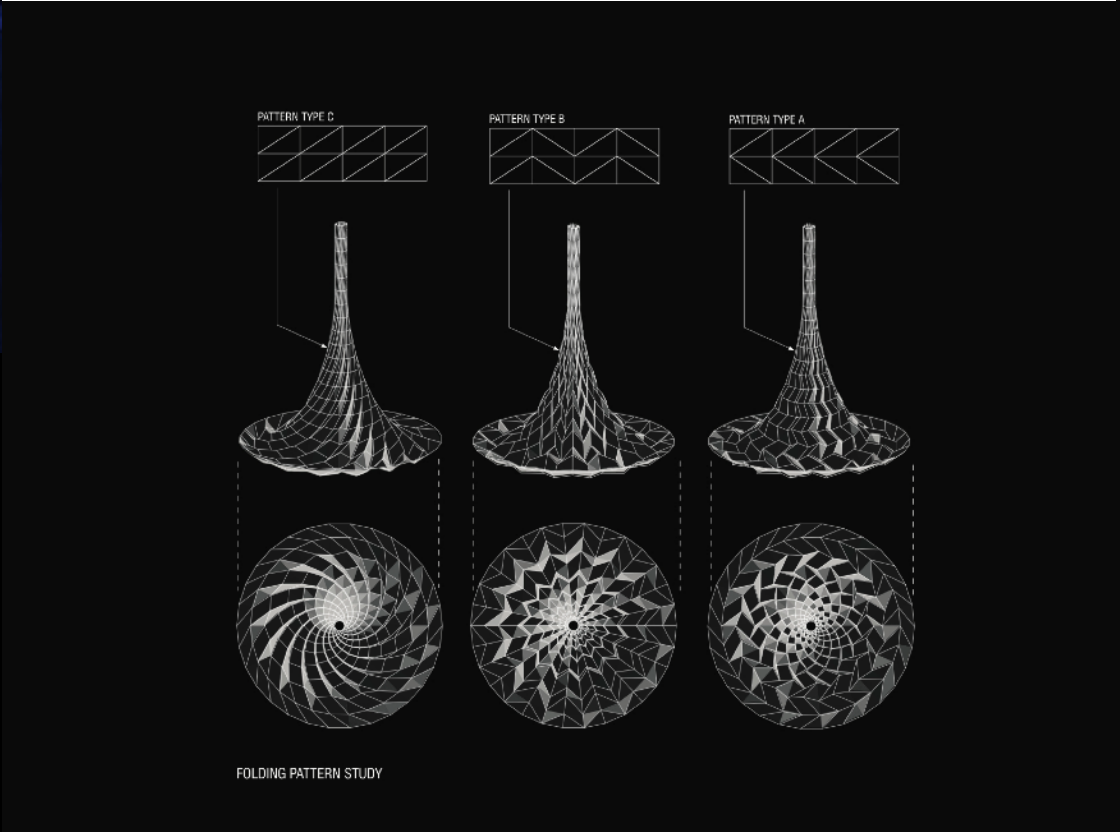
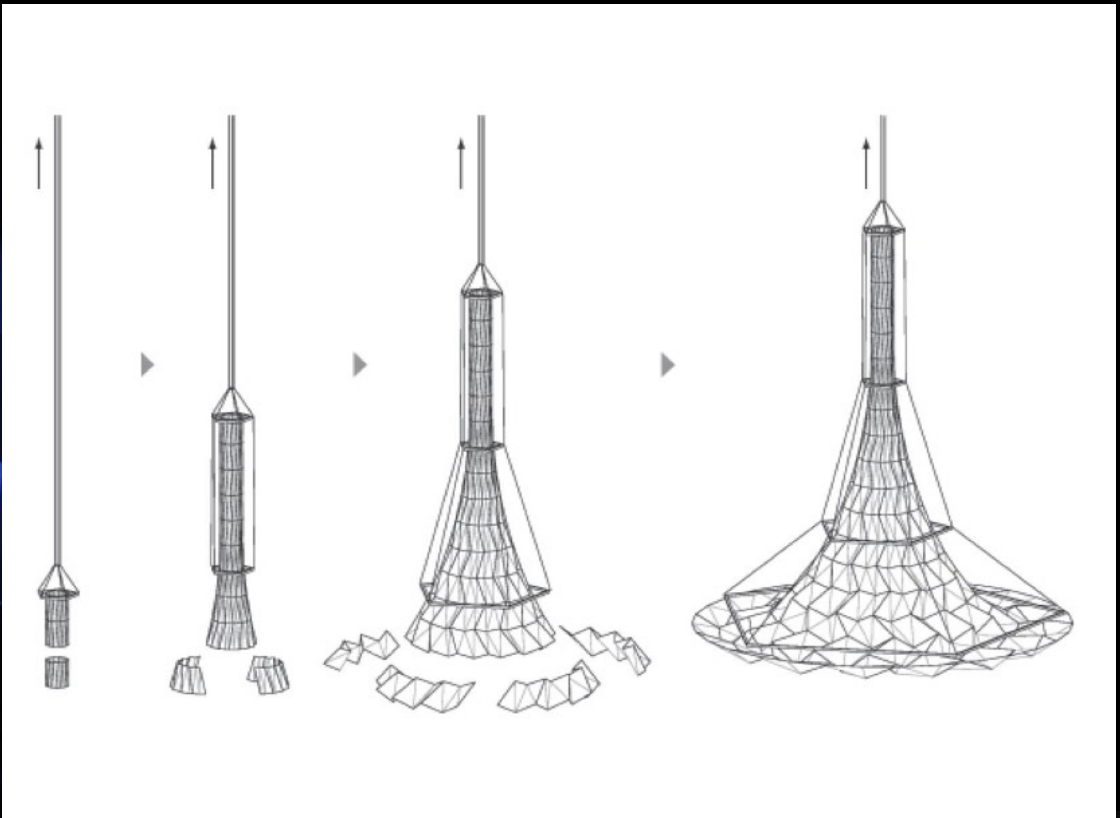
Photos: Aurélie Cenno

The fold, as a multi-layered metaphor for the relationship between mind and matter, inspires plis/replis. The installation is made up of a highly geometric, folded and suspended structure. This architectural augmentation of the space also serves as a functional loud speaker. A glass platform suspended at the focal point within the cone holds a vessel filled with champagne. Using the actual sounds of effervescence picked up by a special microphone immersed in a champagne vessel, a real-time analysis/synthesis audio system creates a continually evolving sound environment, diffused downward from above.

The architectural design of this work combines ancient paper folding techniques with contemporary computer-aided-design and manufacturing processes. The form is inspired by mathematician and origami expert Taketoshi Nojima, especially his work reproducing organic forms from folded paper. Our collaboration with architect Hyoung-Gul Kook allowed us to design, fabricate and assemble this suspended 345 cubic-meter structure from 285 flat sheets of aluminum/polyethylene composite, precisely folded 2,535 times.

“The Baroque endlessly produces folds, it twists and turns its folds, pushing them to infinity, folds over folds, one upon the other. The Baroque fold unfurls all the way to infinity, moving along two infinities, as if infinity were composed of two stages or floors: the pleats of matter and the folds in the soul. A great Baroque montage that moves between the lower floor, pierced with windows, and the upper floor, blind, and closed, but on the other hand resonating as if it were a musical salon translating the visible movements below into sounds up above.”

Gilles Deleuze from “The Fold: Leibniz and the Baroque”, 1992



Press



In *The Tragedy of the Commons*, artists Robin Meier and Ali Momeni recorded the sounds of foraging ants.

Q&A Robin Meier Maestro of the swarm

Swiss acoustic artist Robin Meier manipulates the sounds of insects and birds to create ethereal soundscapes. As his mosquito-inspired musical installation *Truce* is aired in the French city of Nantes, he talks about firefly synchrony and setting up feedback loops in nature.

Why did you choose to work with mosquitoes?

Male mosquitoes serenade potential mates with a 'love song' by vibrating their wings. They synchronize their wingbeats with those of the females to mate in mid-air. I first read about this in a 2006 paper by entomologist Gabriella Gibson and neurobiologist Ian Russell (*Curr. Biol.* 16, 1311–1316; 2006). The constant *glissandi* — gliding from one pitch to another — and 'tuning in' of mosquito wingbeats reminded me of *dhrupad*, an ancient form of Indian classical music often sung by brothers in unison. My collaborator Ali Momeni and I played male mosquitoes some *dhrupad* and, sure enough, they tuned in. We call the piece *Truce: Strategies for Post-Apocalyptic Computation* because we see it as one way that computation could evolve. In the future, the environment could become an extension of our cognitive processes.

How did you become interested in this area? I'm a musician but studied cognitive philosophy, and am very interested in artificial intelligence. One of my first installations, with French experimental musician Frédéric Voisin in 2004, involved manipulating

artificial neural networks to make music. The idea of collective intelligence is a theme that is common to all my work. Intelligence isn't just an intrinsic property; it lies in the interaction between organisms and environment. It is all around us, and I want to harness it to make music.

How did that lead you to work with ants?

With the help of scientists at the Laboratory of Experimental and Comparative Ethology at the University of Paris 13, I conditioned leafcutter ants to associate quinine — which they dislike — with different smells and foods. We built a star-shaped installation called *The Tragedy of the Commons*, which provides a choice of six foods, each in one arm of the star [see go.nature.com/mvbswm]. Here we manipulate the ants' foraging decisions through smell. Once they associate quinine with a certain food, we take the quinine away and the smell of that food alone will put them off. They communicate this to other ants, partly through sound signals called stridulation, when they rub body parts together. Using strategically placed microphones and loudspeakers, we have created a soundscape of their foraging decisions on two levels: an amplification of the stridulation, and an amplification of the sounds of ants eating at the positions they choose.

The sound therefore varies spatially across the installation.

And what about your firefly work?

My virtual firefly project hinges on synchrony. Fireflies synchronize their flashing for courtship purposes. Groups of males of the same species seem to do this so that the passing females can see them better — the flashing pattern is species-specific. When it happens, you see distributed pockets of synchronous flashing appear before they join up and an overall synchrony emerges. Although the behaviour itself is complex, all you need to generate it virtually is a number of identical 'organisms', each equipped with some basic perceptual apparatus and an internal mechanism for adjusting the flashing speed. We have simulated this on a computer.

How do you turn virtual firefly synchrony into music?

You could think of the fireflies as a sort of amateur orchestra and me as their conductor, only I go further by tinkering with their virtual brains. We manipulate their flashing by altering those underlying parameters — the ones that determine how they perceive and generate flashes — and so change the rhythm or even break up the synchrony completely. My collaborator on this project, Canadian artist Yan Breuleux, is interested in the visual effects that this allows him to create. I transform the flashes into sound and create audio effects using standard music-sampling software.

What other projects are in the pipeline?

I've long been interested in the neurobiology of songbirds. Starlings are fascinating because they're such good learners. They imitate car alarms, mobile phones, anything. This year, we intend to build birdhouses in the Camargue nature park in the south of France, and we hope that starlings will nest in them. We'll install speakers and play melodies to them. Because starlings are migratory, the fledglings could carry the tunes far and wide.

Are you 'playing God' with animals?

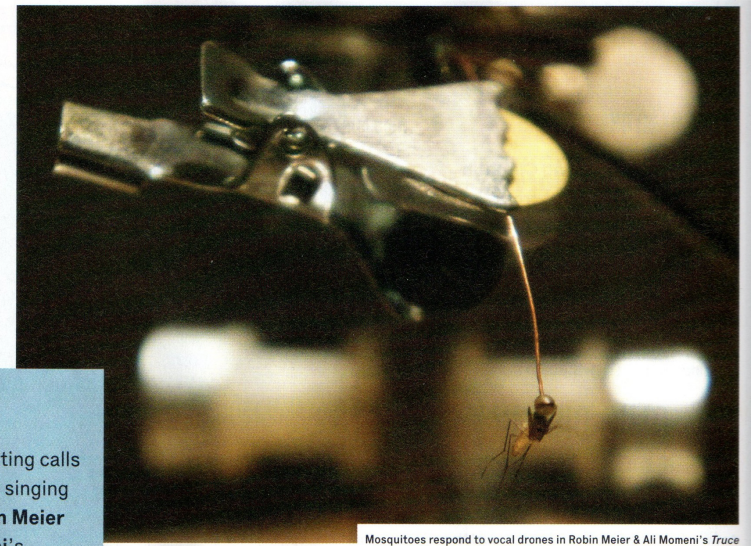
No: God is top-down, we're bottom-up. I think of what we do as more like hacking. We may end up manipulating a few starlings, for example, and our manipulation may be transmitted, but probably only in a small way before it fades like a ripple on a pond. It's not just us manipulating the organism. The organism reacts to our manipulation, we react to its reaction, and so on. We set up feedback loops. ■

Truce: Strategies for Post-Apocalyptic Computation
ROBIN MEIER AND ALI MOMENI
Musée des Beaux-Arts de Nantes
Until 15 January.

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Mosquito mating calls and dhrupad singing inspire Robin Meier & Ali Momeni's insectoid installation



Mosquitoes respond to vocal drones in Robin Meier & Ali Momeni's *Truce*

Robin Meier and Ali Momeni create installations with electroacoustic sound set-ups using live ants, bees and mosquitoes, creatures that have all been chosen for their talents, as Swiss artist Meier puts it — their patterns of behaviour. These patterns are not programmatic and the animals can behave in unpredictable ways as they respond to and shape their changing environment. It's a quality Momeni calls "animal warmth", something that increases human audiences' engagement with the material.

In the case of *Truce: Strategies for Post-Apocalyptic Computation*, three mosquitoes 'sing' in response to computer-generated drones. *Truce*, which will be shown at Glasgow's Sonica festival later this month, was first realised in 2009. It was partly inspired by an article in *Nature* by Gabriella Gibson, an entomologist, who described how male mosquitoes tune in to each other's wingbeat frequencies when competing for females. "This struck us as something completely romantic and magical," says Iranian-born Momeni, who currently teaches at Carnegie-Mellon University in Pittsburgh. He and Meier started developing *Truce* while Momeni was based in Minneapolis. "Since the methodology for producing this effect was described in detail in the article, we decided to try in person. At the time, I happened to be working at the University of Minnesota — in the land of 10,000 lakes — and the university has a lot of facilities for examining mosquitoes."

With mosquitoes in place, Meier and Momeni considered which style of music would best complement their tuning behaviour in order to create a sound performance incorporating the insects. As self-described obsessives about Indian classical singing, they found their answer in the improvised

alap sections of dhrupad, which are unaccompanied by percussion. "Ali and I were driving home after a night work session at the studio," says Meier. "We were listening to dhrupad, saying nothing, as suddenly we were struck by the similarity between the two brothers singing and the mosquitoes tuning in. Dhrupad is all about tuning in. A dhrupad singer's ear is probably as sensitive to pitch as it can get."

Momeni adds: "There is one feature of dhrupad that was so unmistakably relevant to the way the mosquitoes sang together, and that's the pervasiveness of glissandi. In dhrupad, it's common for it to be sung by one or more brothers together, because they have very similar voices. Two similar voices on top of one another, on pitches that are close to one another, produce a chorus, and all of these effects that are greater than the sum of their parts."

The sexual competition of the mosquitoes also finds its echo in the feeling of a duel between singers that sometimes surfaces in an intense and athletic round of dhrupad singing, as it begins slowly and then accelerates in tempo, pushing the performers to the limits of their capabilities as they mimic and challenge one another to keep the pace. "There's an unspoken competition — it's that way of one-upping the other person," says Momeni.

In *Truce*, the computer plays a dynamically stretched dhrupad sample, each mosquito matches its pitch to this computer voice, and the computer analyses this and responds with a third voice. Together, the drones glide over one another, their layers filling the room. The sound volume of the mosquito flying controls a flickering lightbulb hanging overhead, and the mosquito is filmed by a

miniaturised camera, with the image projected on the wall behind. The flickering lights and the projections show when the mosquitoes, too, begin to tire, and need a rest.

When the mosquitoes are not flying, the room crackles with noise from amplified wires wrapped around the mosquitoes' landing platforms. The flickering lights and projections emphasise each creature's individual effort and contribution to the system, and its importance to the whole. Spectators can engage with the mosquitoes by breathing on them (they are attracted to carbon dioxide) or gently extending a finger for each one to explore, encouraging them to fly. In a way, this set-up humanises the mosquitoes: they become impassioned actors singing themselves to exhaustion, instead of pests in need of a swat.

So far, *Truce* has travelled to Minneapolis, Paris, Toulouse, Nantes and Yokohama. For Sonica, Gabriella Gibson's lab helped to procure the mosquitoes. For past events, however, Meier and Momeni have worked with curators to source their mosquitoes from places ranging from the Louis Pasteur Institute to pesticide companies. "I like this part very much because it puts not only us artists but also museum personnel in touch with these creatures," says Meier. "During the preparations for the show in Japan, I had a lot of trouble finding mosquitoes, and I remember the organiser calling me to say that he'd just had a mosquito sit on his arm and he wouldn't dare kill it." □ Robin Meier & Ali Momeni's *Truce: Strategies for Post-Apocalyptic Computation* is a part of Sonica 2013, and shows at Glasgow CCA, 31 October–3 November. sonic-a.co.uk
Emily Bick

BEAUX-ARTS Vendredi 19 juin 2015

Des lucioles, fragiles stars bâloises

Elisabeth Chardon

Robin Meier synchronise la technique et la nature dans une installation produite par la Commission d'art d'Audemars Piguet

Ce sont de petites lumières vivantes. Des coléoptères en fait que les pollutions, chimiques et lumineuses, ont quasiment fait disparaître de nos vies. Voilà les lucioles devenues les timides stars de Bâle, en marge d'Art Basel. Celles-ci viennent du Japon et elles partagent la vedette avec des criquets. C'est en fait un son et lumière pas comme les autres que Synchronicity, une installation de Robin Meier qu'on visite au large de la foire.

La pièce installée à la Volkshaus est la première production de la Commission d'art d'Audemars Piguet. Chaque année désormais, celle-ci invite un nouveau curateur qui va suivre un travail artistique de haute technicité présenté dans un des lieux d'Art Basel, la marque horlogère étant partenaire de la foire. L'an prochain, une exposition sera ainsi proposée à Hongkong, en 2017 à Miami Beach, puis de nouveau à Bâle en 2018.

C'est Marc-Olivier Wahler qui a proposé de travailler avec Robin Meier et qui a suivi avec lui le développement de Synchronicity. Le fondateur et directeur du Chalet Society avait déjà invité l'artiste lorsqu'il dirigeait le Palais de Tokyo, avec une installation où des milliers de fourmis Atta – ou fourmis coupe-feuilles – réagissaient à des impulsions visuelles et olfactives.

Au son des criquets

A Bâle, Robin Meier, un Suisse qui vit à Paris, a créé un monde où lucioles et criquets répondent également à des stimuli. L'artiste est aussi compositeur est il est ici le chef d'orchestre et le scénographe d'une œuvre créée avec le vivant. Des LED invitent les coléoptères à allumer leur lumière. Ces petites lampes artificielles sont synchronisées avec les métronomes qui frappent le tempo au milieu de l'installation, en écho aux sons produits par des ordinateurs. Et les criquets strident à l'unisson.

Quand il y a trop de visiteurs en même temps, ces petites bêtes se font timides, stressent. Ou font la grève. On interprète comme l'on peut la baisse sensible de leurs performances. Il reste que dans cet espace isolé, sous une vaste tente où l'on pénètre au compte-gouttes par un sas, les visiteurs capables d'oublier quelques instants l'agitation extérieure pourront vivre un moment intense. Ils apprécieront la simple beauté des choses, la collaboration entre l'artiste, les techniciens et les spécialistes du vivant nécessaires à leur réalisation. L'œuvre a notamment été l'occasion de reprendre d'anciennes recherches sur les capacités des lucioles à synchroniser leurs émissions lumineuses.

Et ils se demanderont si, à suivre des yeux les petites lumières volant dans la nuit, à tendre l'oreille aux stridulations des criquets, les battements de leur cœur n'est pas un peu influencé lui aussi par cette Synchronicity .

Très lu actuellement



Fin de partie pour le roi des Fêtes de Genève



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Ceux qui oublient les visages



Apulée et son «Ane d'or», conte lubrique et fantastique



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BÂLE

Robin Meier

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Une tente s'élève dans la pénombre, sombre, hérissée de cordages. À l'intérieur, dans une jungle de mousses, de plantes aquatiques et d'herbes hautes, baignés dans la lumière rouge de lampes de culture, des lucioles, des criquets et des machines vivent ensemble. *Synchronicity*: il faut entendre le titre d'abord en ce sens : celui d'une synchronisation, impossible à réaliser complètement, des êtres en présence. Autrement dit, lucioles et criquets ne sont pas contrôlés, seulement influencés. C'est le second sens du titre: la synchronisation ne force pas l'animal, elle se contente d'amplifier une certaine tendance à la synchronicité: lumineuse pour les unes, sonore pour les autres. Les variétés élues l'ont été essentiellement pour cette faculté singulière. Lucioles, criquets et machines sont censés s'approcher peu à peu d'un rythme partagé dont le tempo est déterminé par la fréquence de battement de deux pendules oscillant au-dessus d'un champ électromagnétique. L'étalon de la synchronicité attendue est délégué à l'arbitraire nécessité d'un phénomène physique. Les moyens mis en œuvre diffèrent beaucoup, mais connotent le même sens général: celui d'un étrange pastiche de spectacle. Des guirlandes de leds émettant une lumière verte à une fréquence proche de celle des lucioles clignent par vagues successives à travers tout l'espace – ces vagues sont calculées par un algorithme qui modélise le processus de contamination lumineuse qu'on observe chez elles. Les criquets sont synchronisés par un bruit blanc percussif à faible résonance projeté par des haut-parleurs. Les premiers sont logés dans des niches anéchoïdes disposées en loggia autour d'une petite scène au milieu de laquelle trône le haut-parleur: ils sont comme des spectateurs dans un théâtre à l'italienne. Les seconds forment un cercle presque complet autour d'un microphone qui fait trois fois leur taille. Le pastiche est dans la disproportion entre la visibilité des moyens engagés et le caractère infime de la performance. Criquets et lucioles produisent un spectacle à la limite de la perceptibilité. C'est que l'enjeu de cette installation est ailleurs. Parmi les machines dont cette tente est pleine, il en est un certain nombre dont le rôle est sans rapport avec le processus que l'artiste tente de mettre en œuvre : deux oscilloscopes, un électroencéphalographe et divers

moniteurs qui rendent sensibles divers aspects de l'expérience. Ces machines se synchronisent entre elles autant qu'elles synchronisent criquets et lucioles. Et l'on ne sait pas dans quelle mesure elles ne finiront pas par se synchroniser sur leur rythme à eux. Ce que cette installation donne à percevoir est une association concrètement active de machines et d'insectes. Un monde dont le tempo général est donné par des pendules battant dans le vide et dans lequel l'homme ne joue entre les unes et les autres que le rôle d'un intermédiaire envahissant voué à un effacement rapide. Il lui aura suffi de leur apprendre à vivre ensemble.

Bastien Gallet

Robin Meier est un des artistes sélectionnés pour la 17^e édition du prix **Ricard**, *l'Ordre des lucioles*, 15 sept. - 31 octobre, Fondation d'entreprise **Ricard**, Paris.

Out of the shadows arises a tent, dark and bristling with ropes. Inside, amid a jungle of moss, aquatic plants and tall grass, bathed in the red light of grow lamps, fireflies, crickets and machines coexist, quite literally, in sync. *Synchronicity*: initially, this title has to be understood literally as a reference to a state, a synchronization of simultaneously present living beings that can never be completely realized. After all, the behavior of fireflies and crickets can't be controlled, only influenced. The title word also has a second layer of meaning: insects can't be forced to synchronize, but some do have a certain tendency toward performing in unison—either blinking or chirping, depending on the species—that can be encouraged. The insects featured here have been chosen for

this unusual facility. Fireflies, crickets and machines are said to gradually approach a common rhythm whose tempo is determined by the beat frequency of two pendulums oscillating above an electromagnetic field. The function of metronome for this expected synchronicity is necessarily delegated to a physical phenomenon. The pieces here involved very different materials, but they all had more or less the same content, a strange travesty of a symphonic hall. Garlands of LEDs emitted green light at a frequency approximating the lighting up of fireflies, which approached this beat in successive waves moving through the installation space. An algorithm modeling the process of frequency convergence characteristic of these insects calculated these waves. They were brought into synch by a low-resonance percussive white noise emitted by loudspeakers. The first arrivals were "lodged" in rows of anechoic nests arranged like theater mezzanine seats, with the loudspeaker in the middle of the stage. The second wave formed an almost complete circle around a microphone three times their height. The pastiche lay in the disproportion between the highly visual elements of the stage set and the tininess of the performance. Crickets and fireflies produce a spectacle at the threshold of perception. That threshold is what this installation is all about.

The tent was full of machines, some of which have nothing to do with the process this artist is trying to generate. They included two oscilloscopes, an electroencephalograph and several monitors that made various aspects of this experiment discernable. These machines came into sync just like the crickets and fireflies did with each other. What remained unknown is whether or not all these elements would end up beating out a common rhythm. This installation showed us the concrete and active association of machines and insects. A world where the overall tempo is set by pendulums beating in the void, and where humans cannot intervene except as invasive intermediaries who eventually destroy the process. They need to learn to live together.

Translation, L-S Torgoff

«Synchronicity». 2015.
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