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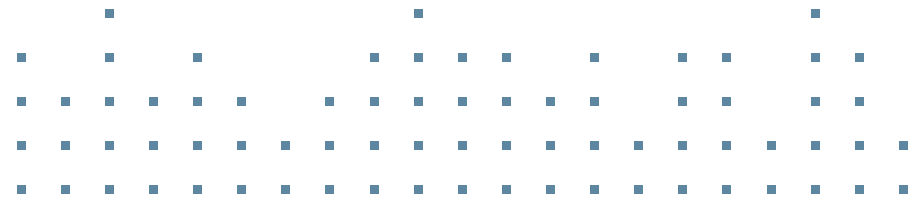


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D I S C O N T I N U I T Y
CTM 2014



DISCONTINUITY
SELECT TRAJECTORIES IN EXPERIMENTAL &
ELECTRONIC MUSIC

CTM – FESTIVAL FOR ADVENTUROUS MUSIC & ART
15TH EDITION, BERLIN 2014

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DIS CONTINUITY

BY JAN ROHLF

»Our task is not to locate and manifest the one greatest musical work or locus of music, and plant it like a monument in human history.« – Adam Harper

The radical evolution of music over the past hundred years – modern musical history, in short – is generally reduced to the exceptional achievements of a limited number of »heroic« individuals, which provide colour enough for music's crucial breaks and transitions to be broadly traced in bright, bold strokes. Yet whoever constructs easily understandable historiographies and genealogies runs a very real risk of forever marginalizing important ideas, discoveries, and cultural expression in the wings of history.

The fabric of musical history is of course far more complex; the conspicuous threads left by its established luminaries are interwoven with countless individual and collective achievements that are no less important and often serve to inspire, communicate, and support its major strands. They criss-cross, feed into one another, or run in parallel, forming vital nuclei of change and innovation within their respective communities and networks. In this vast interconnected fabric stretching across time and space, the simultaneous invention of similar ideas in different locations, the local appropriation of ideas forged elsewhere, and the multifaceted expression to which these give rise are as crucial as any discovery triggered by singular chance, synchronicity, serendipity, a flash of genius or the slow, laborious process of trial and error.

Countless threads lead nowhere, break off, or disappear from sight. Destroyed perhaps by unfavourable circumstance or downright animosity, on purpose or by accident, they eventually sink into oblivion. They are the forgotten branches on music's family tree, stunted by sudden, fateful blows that enable a particular interpretation, ideology, method, technology, or school to triumph over all others, at least momentarily.

Studies of the history of planet earth carried out by palaeontologist Stephen Jay Gould have shown that our traditional notion of progress, as a continuous linear progression from simple to ever more complex states, must be revised. At various stages of the earth's evolution, Gould identified higher than usual accumulations of diversity: seedbeds of a heightened potential for development, which he described as pockets of concentrated »excellence«. Gould therefore dismissed the idea that linear progress was synonymous with a gradual accumulation of complexity and a steady increase in diversity. On the contrary: a substantial reduction in diversity can be seen to have occurred at certain moments in time.

Media archaeology, a relatively young branch of contemporary media theory, has recently considered turning points in culture and technology in light of these same insights, thereby breaking ground for new perspectives with a marked interest in neglected approaches, marginalized discourses, and local knowledge production. Contrary to the continuous progress model, media archaeology's research radar persistently hones-in on matters obsolete and half-forgotten, claiming these as keys to future imagination and speculation. This is one very good reason to seek-out any past moment likely to evince a greater than usual concentration of variety – and makes media archaeologists wary of the idea that any one single cause gives rise to a single phenomenon.

According to media archaeologist Siegfried Zielinski, the most productive phases of »powerful heterogeneity« occur whenever »things and situations [are] still in a state of flux, [and] the options for development in various directions [are] still wide open«. Phases thus, which hold the seeds of anarchy, such as the period of upheaval in post-revolutionary Russia which Andrey Smirnov is presently attempting to reconstruct in his comprehensive research project »Generation Z«. What is therefore required, Zielinski argues, is not so much an archaeology of the media, but an »an-archaeology« – a term that implies a form of research that does not seek to impose order, but to set things in motion instead: »A history that entails envisioning, listening, and the art of combining by using technical devices, which privileges a sense of their multifarious possibilities over their realities in the form of products, cannot be written with avant-gardist pretensions or with a mind-set of leading the way«.

To acknowledge such complexities, for example in the history of music, creates leeway for less hierarchical perspectives; and the number of courageous, creative, and stubbornly persistent pioneers producing enriching varieties of music in their broad spectrum of sightlines is visibly multiplying. With each pioneering deed, each idiosyncrasy, each new technological invention, each aesthetic sensibility, the tree of possibility sprouts new branches, and as long as we retain the possibility of returning to them at will, they hold potential to broaden our musical horizons.

This is an extremely sympathetic approach, not only because it attests to the endeavours of many extraordinary people and life achievements. Writing alternative histories, discovering obsolete

equipment, appropriating old methods, rethinking forgotten ideas, is by no means only a sign of an embarrassing lack of new ideas, but also a crucial component of the art of combination that is so necessary to assuring and strengthening heterogeneity. To bend and warp timelines so as to travel through past and forgotten spheres and return them thus to the realm of uncertain futures, is a neat way to graft new life onto the consensual view of development that tends to corral our imaginations.

This perspective may also possibly help lay to rest Reynold's ghost of Retromania, now afloat for a few years. For that which Simon Reynolds has roundly condemned as a stale no-hope future retreat into archives that seem to have nothing to offer but plush deserts of nostalgia, reconstructed virtual idylls, or at the very best, some kind of trauma rehab circuit, may perhaps prove to be nothing less than a deconstruction of the dominant time model of history itself.

Wolfgang Ernst defends this very thesis in a core text included in this publication, wherein he highlights the impact of the technological transformation of archives, from storerooms for hidden, static knowledge, into dynamic and publicly accessible real-time databases. Ernst further pinpoints, from a media theory and technological perspective, just why electronic archives literally demand the re-circulation of the past. Any archive set into motion and flux facilitates the permanent fluctuation of ahistorical orders as well as free experimentation with bits and pieces derived from different layers of time; and it thus challenges the symbolic order of historiography and the linear flow of historical time. According to Ernst, the growing tendency to reference the past »suggests that that which characterizes the popular and experimental culture of today is not just the cultural nostalgia of a society which has lost its avant-garde bias but also a direct function of its storage technologies, which have become an integral part of present-day data circulation and processing«. This function is reinforced moreover, by virtue of being embedded in the capitalist value system: »Emphatic storage waiting for (re-)circulation belongs to the logic of late capitalism and thus is part of a memory economy.«

The research trip into little known and forgotten regions of electronic and experimental music – upon which CTM 2014 embarks under the intonation »Dis Continuity« – is in this respect not so much an historic as an archival endeavour. The interest lies in pursuing an approach to the past that does not lead instantly to a canonical version of history but fathoms the ambiguous variety of people, events, inventions, and their complex interrelations, and then puts these at the service of new speculation on the present and future.

Digital databases and the an-archives of the Internet are recombinational machines, in the incessantly flowing, overlapping waves, interference, and shifting patterns in which Wolfgang Ernst identifies a musical dimension. Here, past and present no longer reference one another in a clear linear historiography but expand the present by generating dynamic resonance effects and emphatic affects. In this disruption of hegemonic time lie the seeds of the new. In the unresolved tension between the new possibilities of »hetero-

chronic« experiments and the need to uphold a »well-defined order [of history] intact for transmission into future memory«, between the linear flow of time and the dissolution of temporality, between continuity and discontinuity, a new anarchic moment comes into being, one that may perhaps lead to new »excellence« in the form of a radical expansion of variety.

It is thanks to the free play of the greatest possible number of variables and the infinite possibilities for their (re-)combination that the potential for hitherto unheard music will always be with us, claims music journalist Adam Harper in his book *Infinite Music*. Alternative stories, forgotten ideas and adventures, suppressed discourses, the tricks of memory and new perceptions of time all have the potential to inject endless new variables into the music system. The future of music, we might then say, is therefore no cause for concern.

A new art for our time is on the horizon, »Temporal Art«, or an »Archive Art« perhaps, as Hillegonda Rietveld suggests in another contribution to this magazine that discusses changes in DJ culture: »Perhaps, then, we can understand the DJ as a kind of a Time Lord of counter-memory, not only playing with the temporality of the musical rhythm and the narrative structure of a musical journey, but also enabling audiences to surf multiple perceptions of historical time.«

Such new perspectives arise whenever disparate discourses on music, art, media theory, and aesthetics interconnect or fuse. CTM has been staunchly defending and promoting this premise since 1999, a premise that is also the baseline of this magazine and all the texts contained within. »Dis Continuity« is, we (Oliver Baurhenn, Remco Schuurbijs and myself) find, an appropriate title for the fifteenth anniversary of an unorthodox festival that has never had any choice but to look to an uncertain future, given that it swings annually on a shoestring, from one uncertain funding pot to another. All the greater our delight, therefore, in being able to present a 2014 edition of CTM that is stronger, more mature, and richer in content than any before.

All the greater our gratitude, too, for the many that support and sponsor our endeavours: to the Capital Culture Foundation, the Cultural Programme of the European Union, the Federal Office for Political Education in Germany, the Federal Commissioner for Culture and Media, Initiative Musik, Musicboard Berlin, various national cultural institutions and embassies in Berlin, our media and programme partners, and our supporters from the commercial sector including, first and foremost, Satis & Fy. We also thank the authors who contributed their inspiring insights, derived from a broad spectrum of disciplines and expertise, to the magazine.

Finally, we thank our audience, festival participants and artists, our fantastic team, and the numerous festival volunteers, friends and family who year after year help realize more than we could ever have dreamed possible when we first embarked on this (ad)venture.

[Jan Rohlf](#) is Co-Founder of the CTM Festival.

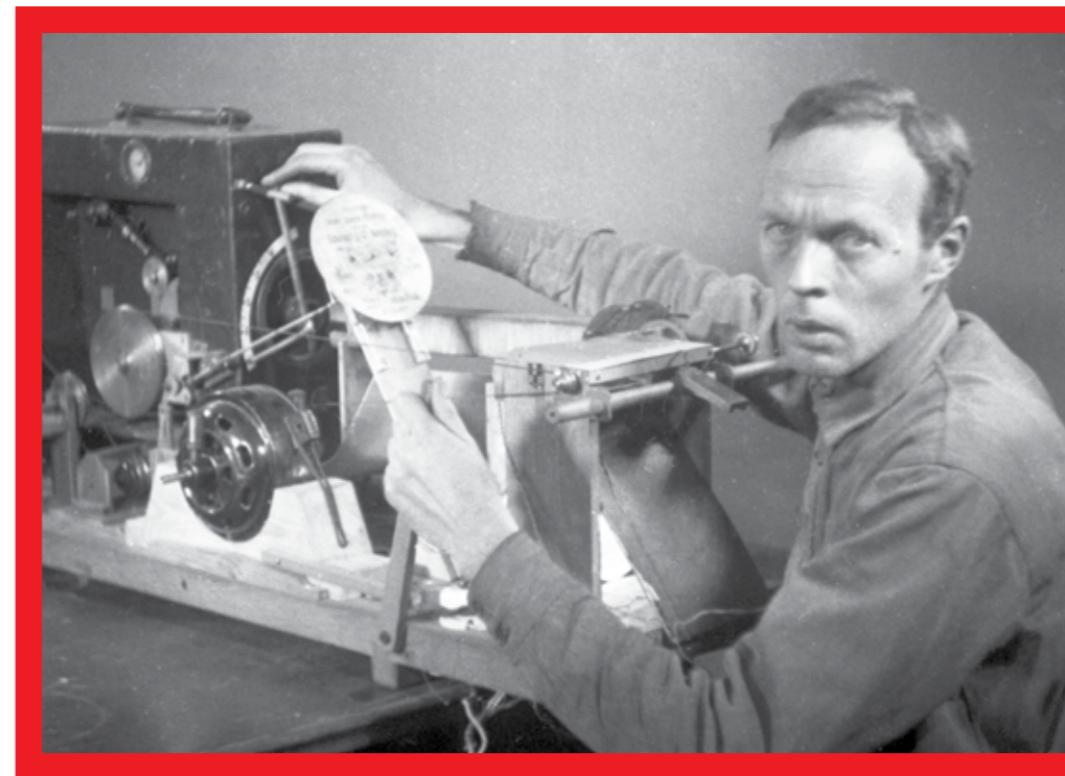
GENERATION Z : RENOISE

EXPERIMENTS IN SOUND AND ELECTRONIC MUSIC IN
EARLY 20TH CENTURY RUSSIA

BY ANDREY SMIRNOV & LIUBOV PCHELKINA



»Generation Z« is an exhibition of audio, visual, and textual documentation material, dedicated to the lost and forgotten history of Russian experimental music and related technologies. The exhibition has been developed as a part of an ongoing namesake research project by Andrey Smirnov and Liubov Pchelkina. It attempts to restore the censored history and culture of Russia's artistic Utopia of the 1910-20s, which was destroyed through its collision with the totalitarian state of the 1930-40s. The title of the exhibition takes its name from the letter Z, which is in many ways emblematic of the period. Z is for zigzag, the spark; it is the symbol of energy, of radio transmissions and communications, of electrical charges, and of lightning.



*This page: Evgeny Sholpo works with the first version of the Variophone, Leningrad, 1932. Photo courtesy of Marina Sholpo.
Left page: The third portable version of Leon Theremin's Rhythmicon, built at the Acoustical Laboratory of the Moscow Conservatory in 1965.*

Following presentations in Paris¹⁾, Budapest, St. Petersburg, and Moscow, and the publication of the book »Sound in Z : Experiments in Sound and Electronic Music in Early 20th Century Russia« (Walter König 2013), the Berlin instalment of the »Generation Z« exhibition, presented at CTM 2014 festival, has been expanded with the new section »ReNoise«, developed by artists Konstantin Dudakov-Kashuro, Peter Aidu, and Evgenia Vorobyeva, and based on select reconstructions of the more than 200 mechanical noise instruments invented by Vladimir Popov (1898-1969) between the 1920s and 1950s.

In many ways, the »Generation Z : ReNoise« exhibition tells a story of utopias and anti-utopias, of the avant-garde and the institution, of collaboration and personal achievement, of ambition, opportunity, and oppression of genius and bureaucracy, of intellectual freedom and totalitarianism. It is a story of remarkable personalities, curious inventions, astonishing performances, radical ideas, and experimentation. It is also a story of patents and funding applications, success and failure, support and rejection, optimism and disillusionment. Much interesting and significant material from this history will never come to light or has been forgotten or overlooked, whether for political or financial reasons, because stories are not well documented, or simply because they simply have not been heard by the right people at the right time. A lot of material from the first half of the 20th century was actively destroyed or written out of the history books because it did not fit within the Stalinist regime's vision of what sound and music technology should be. It is a story of which only fragments are known, not only in the West but also within Russia itself.

While the history of Russian post-revolutionary avant-garde in art is generally known, the inventions and discoveries, names and destinies of the community of sound researchers, apologists of musical machines and noise orchestras, and inventors of new musi-

cal technologies have until now remained largely forgotten and little-studied. The only project of its kind, the »Generation Z« exhibition offers an introduction to some of the period's key figures and their areas of research. It is an attempt to reconstruct the artistic utopian island in 1920s Russia that developed around a kind of »network culture« connecting revolutionaries in art. Within this network, seemingly unreal projects in sound and hardware were realized, and concepts and methods that offered a promising basis for future scientific and cultural development were created.

In the aftermath of the October Revolution (1917) both society and the State sought alternatives to the old religious values and bourgeois idealism to fill the vacuum that had been left by the Tsar's overthrow. The ideology that emerged desired a new kind of art based primarily on materialism, natural science, and formal analysis rather than on abstract emotions or subjective taste. It was an objective, rationalist agenda with a scientific and technological approach to the arts. Special institutions were founded for the development and improvement of the »New Human«, engaged in the mastering and perfection of professional motion in sports, working life, military activity, musical performance, and so on.

Therefore, a unique opportunity arose: the State was keen to encourage art that broke with traditions and was being developed in entirely new ways. Government representatives including Leon Trotsky and the people's commissar of enlightenment Anatoly Lunacharsky, approved highly experimental projects, encouraged freedom of the creative community, and supported the so-called Left. In 1918 Lunacharsky officially proclaimed that the arts should be developed on an experimental basis. As he told the composer Sergei Prokofiev: »You are revolutionary in music as we are revolutionary in life - we should work together.«

In 1919 the painter Varvara Stepanova noted in her diary: »The principles of Russian painting are as anarchical as Russia with its spiritual movement. We have no schools, each painter is a creator, everyone, being an innovator, synthetic or realist, is original and highly individual.« This might be viewed as a metonym for the whole of the Russian revolutionary artistic utopia of the early 1920s, when the Russian State was almost at the point of collapse and society was structured as a kind of anarchical »network culture«, based on numerous cross-connected »creative units« comprising artists, scholars, and politicians.

A term that sought to capture the essence of the period was proposed by the artist and philosopher Solomon Nikritin (1898-1965). *Projectionism* (from the Latin »projectus«) was intended to reflect the urge to rush ahead, or more accurately, to rush into the future. He applied this term not only to new approaches in painting and methods of art criticism, but also to the methodology of constructing a new society, to which it was considered necessary to aspire.

In 1919 Nikritin developed his fundamental theory of Projectionism. According to his philosophy, the method becomes the purpose of the creative process. In the context of »projecting the method«, even faults and paradoxes gained a new constructive sense and value. In the early 1920s much project-based research took place that could be considered within the framework of Projectionism, including Alexei Gastev's »Art of Movement« exhibitions, the concert-lectures by Leon Theremin, and Arseny Avraamov's concert series »Music of the Future«, in which the author demonstrated his practical ideas regarding the future of musical harmony and techniques, rather than presenting finished musical pieces.

Artists, poets, musicians, and architects rushed enthusiastically into the new reality, studying physics and mathematics, embracing sciences concerning the nature of light and sound, and developing theories about what became known as »the Art of the Future«.

One of the main heroes of the epoch was Arseny Avraamov (Krasnokutsky) - an adventurer, scholar, composer, performance instigator, circus acrobat, music journalist, and creator of the first ever artificial soundtrack. In a series of articles from 1914-1916,

he developed the theory of microtonal »Ultrachromatic« music and invented a special instrument with which to perform it. It was he who proposed, in 1916, the idea of spectral analysis of the shape of the gramophone groove, with the subsequent transformation of the spectrum and re-synthesis of the new artificial groove. Shortly after the October Revolution, Avraamov proposed to the Commissar of Enlightenment, Anatoly Lunacharsky, a project to burn all pianos - symbols of the despised twelve-tone, octave-based »well-tempered« scale, which he believed had adversely affected human hearing for several hundred years.

Meanwhile, in 1916 a student at the Neurological Institute in Petrograd, Denis Kaufman (aka Dziga Vertov, 1896-1954), attempted what would now be called sound poetry and audio art. As he put it: »I decided to include the entire audible world into the concept of »Hearing«. It was during this time that I attempted to draw up the sounds of a lumber-mill. [...] I tried to describe the audio impression of the lumber-mill in the way a blind person would perceive it. In the beginning I wrote down words, but then I attempted to capture all of these noises with letters. [...] It also concerned my experiments with gramophone recordings, where from separate fragments of recordings on gramophone disks a new composition was created. But I was not satisfied experimenting with available pre-recorded sounds.« Being frustrated, he has switched to film to organize not the audible, but the visible world.

In the spring of 1917 the Leonardo da Vinci Society was founded in Petrograd by Arseny Avraamov, inventor Evgeny Sholpo, and mathematician and musicologist Sergei Dianin. Their objective was to unite efforts to produce a revolution in musical theory and techniques based on the cross-connection of arts and science. They declared that academic views on music theory were dull and scholastic, and that techniques relating to it were old fashioned, proclaiming that both were becoming increasingly outdated.

In the summer of 1917, Evgeny Sholpo wrote a science-fiction essay entitled »The Enemy of Music« in which he described an electro-optical sound machine named the Mechanical Orchestra, capable of synthesizing sounds with complex dynamical spectrums as well as producing music according to a special graphical score

without any need for a performer. Describing future music, Sholpo thought in categories of continuity, sonority, spectrum, and their temporal dynamics, erasing the difference between pitch-based harmony structures and the spectral tissue of a sound.

While some ideas from that period were little more than science fiction at the time, many projects and proposals were more immediately viable or actively sought to develop the technology necessary to deliver them.

Perhaps one of the most charismatic figures in the history of electronic music and audio technology was Leon Theremin, well known as the inventor of the first commercially produced electronic musical instrument, the Theremin (also referred to as the Termenvox, 1919-20). As a physicist, musician, and engineer, Theremin worked at the crossroads of creative technology and espionage developing innumerable projects, often trying to combine music with colour, gesture, scent, and touch. It is hardly possible today to imagine any synthesizers, burglar alarms, or automatic doors, without his pioneering research.

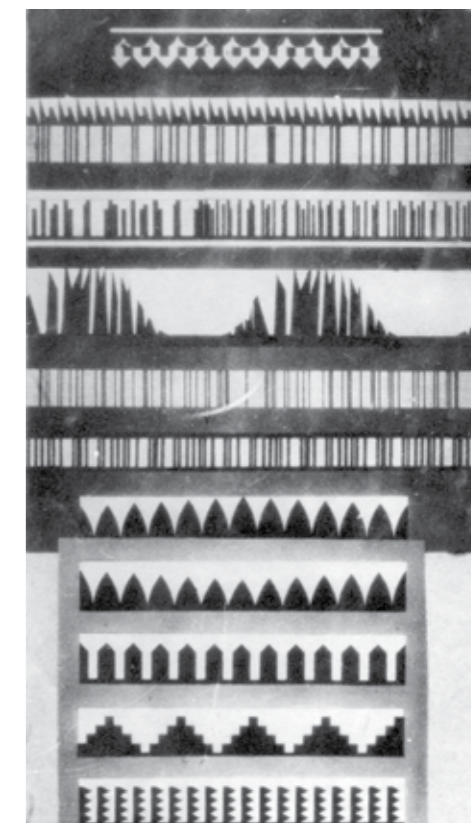
Despite the fact that Leon Theremin initiated a new technology rather than a new aesthetic, his groundbreaking musical invention led not only to the application of the technology for a variety of civilian, military, surveillance, and espionage purposes, adding to his status as a cult figure in electronic music in the West, but also provoked new aesthetic trends and discoveries all over the world.

While the career of Leon Theremin the physicist began at the Institute for Physics and Technology in Petrograd, his musical career began in Moscow, at the State Institute for Musical Science (GIMN). The GIMN was founded in Moscow in 1921 in an attempt to centralize all activities related to musical science, including disciplines such as acoustics, musicology, psychology, physiology, the construction of new musical instruments, and ethnomusicology. Nikolai Garbuzov was appointed director.

Since the beginning the GIMN was oriented towards academic research. Among the many scholars and inventors active at

the institute were Arseny Avraamov, Leonid Sabaneev, Peter Zimin, Nikolai Bernstein, Pavel Leiberg, Boris Krasin, Emily Rosenov, and Mikhail Gnesin. Numerous research projects were conducted, articles published, and experimental devices built, including a harmonium tuned to a natural (overtone) scale and a quarter-tone harmonium with two keyboards. Nikolai Garbuzov built a device to study the phenomena of synopsia (colour hearing). Sergei Rzevkin built his radio-harmonium on cathode valves, which was the second electronic musical instrument to be built in Russia after the invention of the Theremin. It was a sort of three-voice oscillator, capable of producing polyphonic chords in any temperament.

Working on the GIMN's draft programme, Arseny Avraamov proposed a project named »Topographical Acoustics«. He suggested building powerful electroacoustic systems that could be installed on airplanes, from which vast areas of land could be covered with sound. Some of his projects explored new genres of music devised specifically for urban contexts and presented around the built environment. One such project by Avraamov referenced in the »Generation Z« exhibition is the »Symphony of Sirens« - a large scale, open air performance of factory whistles, foghorns, artillery fire, and all manner of machine-made noises, first staged in the port town of Baku in 1922 in celebration of the fifth anniversary of the Revolution. This epic spectacle featured a cast of choirs, the foghorns of the entire Caspian flotilla, two batteries of artillery guns, a number of infantry regiments including a machine-gun division, hydroplanes, and all of the town's factory sirens. The conductor, posted on a purpose-built tower, signalled various sound units with coloured flags and pistol shots. A central sound-machine called the »Magistral« contained 50 steam whistles controlled by a crowd of musicians following »text-scores«. A second performance of the Symphony took place in Moscow in 1923.



First artificially drawn ornamental soundtracks by Arseny Avraamov (1930).

CIT poster. »Let's take the snowstorm of the revolution in the USSR, let's put in the rhythm of American life and perform the well-adjusted work as a chronometer.« From the book »Youth, goals«, by A. Gastev, VCSPS, Moscow, 1923.



Evgeny Sholpo, Variophone, version two-three, late 1930s. Photo courtesy of Marina Sholpo.

In 1921-23, performances of the Projection Theatre at the Foregger Studio and sound experiments at the Proletkult Studio, directed by Sergei Eisenstein, provoked a fashion of noise music and noise orchestras. Many inventors patented new sound machines specially intended for performance of noise music. Some devices based on electro-optical, electro-mechanical, and other new electronic technologies were ahead of their time by decades. Among them was »The mechanical keyboard instrument for the reproduction of speech, singing and various sounds«, invented in 1925 by D.G. Tambovtsev, which was a kind of proto-sampler very similar to the famous Mellotron popular in the 1970s. The »Electro-Optical Musical Instrument«, invented by Sergeev in 1926, was based on the principle of the optical siren. It was a kind of electro-optical sound synthesizer that incorporated a sequencer based on a graphical score to program the most complicated rhythms and harmonies.

In 1926-29 the first practical sound recording systems, based on sound-on-film technology, allowed access to sound as visible shapes on film strips that could be studied and manipulated. This new possibility paved the way for a systematic analysis of audio traces such that they could be used to produce any synthetic sound at will, which led to the invention of the »Graphical (Drawn) Sound« techniques. It also opened up a long-awaited opportunity for artists fascinated by the idea of sound as an art medium to edit, process, mix, and structure pre-recorded audio material, combining any sound at will, which led to the creation of numerous soundtracks based on the aesthetics of noise music.

The film critic Alexander Andrievsky noted in 1931: »While abroad the first works related to sound cinema were mainly based on music material, in the USSR we had another trend. The main audio material of the first sound movies was based on *noise and various rumblings*.«

In 1928 Sergei Eisenstein, Vsevolod Pudovkin, and Grigory Aleksandrov published the major aesthetic document *The Future of Sound Film*, in which the main emphasis was placed on the idea of the contrapuntal method of combining sound and imagery. »... ONLY A CONTRAPUNTAL USE of sound in relation to the visual montage piece will afford a new potentiality of montage development and perfection.«

In 1929 Dziga Vertov made the first field sound recordings by means of portable sound-on-film equipment, which was specially built for him by inventor Alexander Shorin. The equipment allowed him to record actual urban sounds and industrial noises, which he used to score his film *Enthusiasm* (1930). The score became the first approach to what would later be called *musique concrète*, which was invented by Pierre Schaeffer in France in 1948 and initiated the development of electroacoustic music.

Meanwhile, in 1929 the first Soviet experimental sound film *Piatiletka. Plan velikih rabot* (The Plan of Great Works), directed by Abram Room with a soundtrack by Arseny Avraamov, was released. As Room pointed out, »For us, the visual material played a secondary, supporting role, being an outline for sound design... each of us

had to apply himself to the theory of radio and acoustics.« Avraamov in turn noted, »I should also say that I don't see any contradictions at all between music and noise... I did not want to involve any conventionally organized music in the film (slipping into melodic symphonic moments).«

It was Avraamov who completed the first artificial drawn ornamental soundtrack in 1930. That same year Evgeny Sholpo invented the Variophone. It was a continuation of research that Sholpo had been conducting since the 1910s while working on »Performer-less music«.

By 1936 there were four main trends of Graphical Sound in Soviet Russia: hand-drawn Ornamental Sound (Avraamov, early Boris Yankovsky); hand-made Paper Sound (Nikolai Voinov); Variophone or automated Paper Sound (Evgeny Sholpo, Georgy Rimsky-Korsakov); and the method of Syntones, based of spectral analysis, decomposition, and re-synthesis techniques (Boris Yankovsky).

The first version of the Variophone was built in 1931 by Sholpo together with composer Georgy Rimsky-Korsakov, grandson of the famous composer Nikolai Rimsky-Korsakov. It was capable of producing artificial soundtracks by means of automated Paper Sound techniques. Many soundtracks for movies and cartoons were created using the Variophone. Among the most accomplished pieces recorded with the Variophone in 1933-34 were »The Carburettor Suite« by G. Rimsky-Korsakov, »Waltz« by N. Timofeev, »Flight of the Valkyries« by Richard Wagner, and Franz Liszt's sixth Rhapsody. During the blockade of Leningrad in 1941, together with composer Igor Boldirev, Sholpo synthesized one of his most experimental pieces - the soundtrack to the cartoon »Sterviatniki« (»The Vultures«). Although aesthetically these works are similar to Walter Carlos' »Switched-on Bach« from 1968 and sounded like 8-bit music, the main difference was in their timing. In 1918 Sholpo developed special tools - the Melograph and Autopianograph - to register the temporal characteristics of live musical performance. Much electronic music has a rigid tempo, like a metronome; Sholpo was able to simulate more subtle variations in tempo such as Rubato, Rallentando, and Accelerando, based on his careful analyses of live piano performances by the most accomplished pianists.

In 1932-35 Boris Yankovsky proposed the Syntone method, based on research into structural similarities and distinctions among spectrums of sounds of different character to limit, as far as possible, the number of calculations needed for the additive synthesis of various complex sounds. This method was based on pure audio computing techniques and possessed properties very common for digital technologies, such as discretization and quantization of audio signals and related spectral data, manipulation with ready-made parts, and operations with selections from databases of the basic primitives (templates), that distinguished it from the methods of analogue signal processing. It can be considered as a sort of proto-computer for music techniques, with many of the typical features of modern digital technology in sound and music computing.

Yankovsky developed several sound processing techniques, including pitch shifting and time stretching, based on the separation of spectral content and formants and resembling the recent computer music techniques of cross synthesis and the phase vocoder.

To perform complex mathematical calculations of waveforms as well as other important parameters of sound and automated musical performance such as rhythm, there were special »employee-computers« on staff in the laboratories of Boris Yankovsky and Evgeny Sholpo. These were mathematicians whose specific task was to make calculations. To realize these ideas, Yankovsky invented a special instrument, the Vibroexponator - the most paradigm-shifting proposal of the mid-1930s.

In 1939 Yankovsky met Evgeny Murzin (1914-70), a young inventor fascinated by the idea of a universal tool for sound synthesis, and after a year of conversation the final concept of their future instrument was formulated. In 1957 Murzin completed and patented a photo-electronic musical instrument called the ANS Synthesizer. It was remarkably close to the concept of Evgeny Sholpo's *Mechanical Orchestra*. The instrument was based on Boris Yankovsky's proposed scale of 72 steps per octave, and incorporated a set of 576 optical sine wave oscillators, adjusted on fixed frequencies and forming a discrete scale, covering the whole audible range with intervals between successive pitches undetectable to the human ear. Control over the system and the process of sound synthesis was carried out by means of a special graphical score, with a diagram representing the spectrum of a sound by means of drawn transparent strips with appropriate shape and slopes. A principle similar to this graphical score was used in the legendary UPIC computer system, developed by Iannis Xenakis in 1977 at the Centre d'études de mathématique et automatique musicales (CEMAMu) in Paris.

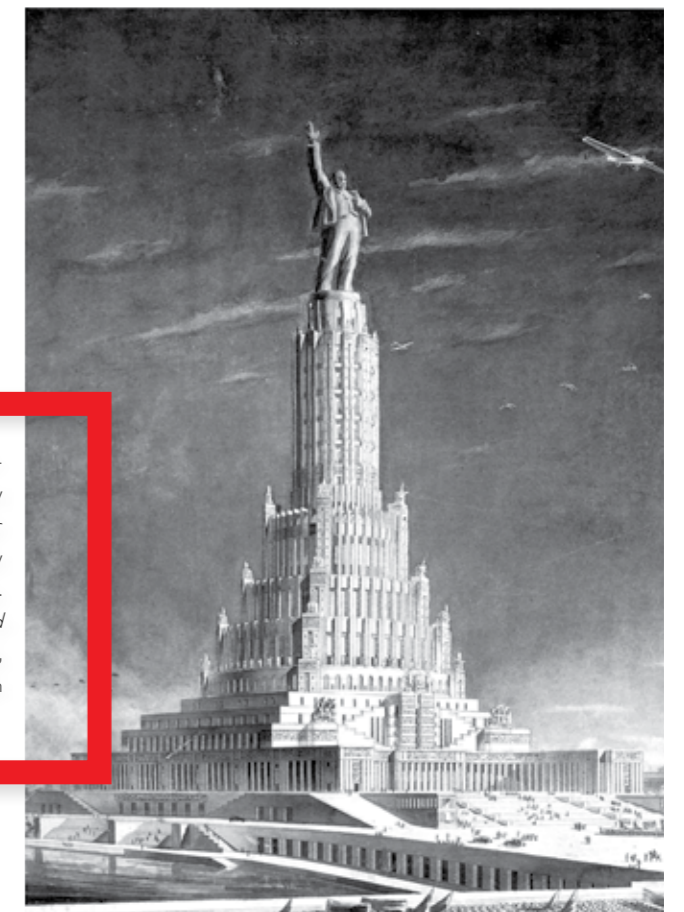
Researchers involved in Graphical Sound had to overcome enormous technical and theoretical (as well as more mundane) difficulties during its short existence. The results of their work were surprising and unexpected, and ahead of their time by decades. However, after Lenin's death in 1924 and Stalin's rise to power, collision with the increasingly totalitarian state was fatal. In less than ten years, all of their work had ended and was almost instantly for-

gotten. By the late 1930s, the cultural and intellectual elite of the previous two decades had been rendered powerless or effectively written out of »official« histories and excluded from textbooks as though they had never existed. The last phase of Stalin's epoch was entirely fruitless for music technology. All the talent that emerged during this period was directed towards the ideas and projects of the 1910-20s. The new generation of engineers, living in cultural and informational isolation, was primarily engaged in attempts to copy or follow Western developments. It became a time synonymous with poor quality fakes and considerable frustration. No significant inventions were made in the realm of musical technology in Russia until the turn of the millennium.

Life has since confirmed the value and significance of the work and foresight of the lost pioneers. Many ideas and inventions, which at the time might have been considered utopian, were reinvented decades later. We use them today without knowing their origins, and many ideas from this period appear to still be awaiting fresh consideration.

*1) The first version of the exhibition was shown between September 2008 and January 2009 under the title »Sound in Z« at the Palais De Tokyo in Paris within the framework of the exhibition project »From One Revolution To Another« by British Turner Prize winner Jeremy Deller.

Andrey Smirnov is an interdisciplinary artist, independent curator, collector, writer, composer, researcher, and developer of new techniques in computer music. He is the former founding director of the Theremin Center for Electroacoustic Music at the Moscow State Conservatory and head of its Sector for Media Technology. He is also the author of *Sound In Z: Experiments In Sound And Electronic Music In Early 20th Century Russia* (Walther Koenig, 2013) and curator of the »Generation Z: ReNoise« exhibition at CTM 2014.



Palace of the Soviets. Drawing of one of the approved projects, 1934, by Boris Iofan, Vladimir Gelfreikh, Vladimir Shuko, and the sculptor Sergey Merkulov.

RENOISE – RECONSTRUCTING THE HIDDEN HISTORY OF REVOLUTIONARY NOISE MUSIC

BY KONSTANTIN DUDAKOV-KASHURO

The year 1913 marked the 100th anniversary of Luigi Russolo's seminal manifesto, *The Art of Noises*, in which the famous Italian futurist anticipated the radical sound experimentation that evolved throughout the 20th century and beyond. This centenary, however, did not shed light on one of the most obscure histories of early sound art, which for the most part occurred independently of the influences of Italian Futurism, that is, noise experiments undertaken in Soviet Russia in the 1920s and 1930s. This particular history has remained hidden until today, partly due to the neglect typical of the Socialist Realism era, and partly because only a small amount of evidence has been preserved. »ReNoise« – the complementary project to Andrey Sminrov and Liubov Pchelkina's »Generation Z« research project – sheds light on two main components of early Soviet noise art: amateur noise bands, widely spread across post-revolutionary Russia, and new forms of sound design used in theatre and film production over several decades, up to the 1960s. It is noteworthy that both trends were intertwined in the first sound movies of the early 1930s, directed by former leaders of theatrical avant-garde. So what was essential and original about this noise breakout?



Peter Aidu plays the chairphone, a proletarian amateur instrument, at a *Reconstructing Utopia* performance, Moscow, 2013. Photo: N. Cheban.

Probably one of the most distinct features of the Russian noise movements of the time is the absence of a single predominant tendency, whether rooted in Futurist ideas or other schools. One may refer to Constantin Stanislavski's autobiography, *My Life in Art*, in which the theatre director recalls a production entitled *The Snow Maiden* from 1900, which featured a backstage noise orchestra consisting of »whistles, castanets, and other machines, many of them invented by ourselves for the purpose of making peculiar noises«. This and other references to stage practices at the turn of the 20th century reveal that theatre in particular made increasing use of noises. Yet the case of *The Snow Maiden* shows a fascinating correspondence with noise accompaniment not uncommon in medieval Russian folk traditions. Relics of the vast *skomorokh* tradition, which is characterized by the use of unconventional self-made instruments or just ordinary objects, have partially survived in the practice of musical eccentrics. Many such traditions, employed by musical clowns at the turn of the century, shifted to avant-garde theatrical circles in the early 1920s. Within the exhibition »Generation Z : ReNoise«, a number of such eccentric musical devices, reconstructed by The Music Laboratory group³) will be exhibited: a bottlephone (a percussion instrument with hanging bottles), a pig bladder and vein »string« attached to a mop, a saucepan drum, and others.

Although it is difficult to trace the origins of Soviet noise orchestras, they seemingly first appeared in 1921 as part of small agitprop theatrical troupes. Others, such as the nearly obscure Poekhma, which played brooms, doorbells, car horns, sticks, etc.,

imitating steam engines or the soundscapes of metropolises, and which even held concerts in the Saratov Conservatory, stayed closer to the late Futurist scene and to Proletkult (proletarian culture movement) in particular. The year 1922 saw the further emergence of noise orchestras that performed as a part of the Moscow Proletkult Theatre and Mastfor (the workshop of Nikolai Foregger). Under Sergei Eisenstein's guidance, the Proletkult comic noise band was set up along with a project that strove to create »orchestras of the separate industry sector«, where the instruments should have represented particular types of (industrial) production. Foregger's orchestra, according to some recollections, must have represented a comic trait as well as an industrial one, especially when accompanying the machine and electrical dances for which Mastfor was renowned. Even though Mastfor soon disbanded and Eisenstein became more and more involved in motion picture production, the practice of noise orchestras, combining harsh noises with imitations of standard instruments, spilled over into other theatrical groups, particularly in the genre of a »Living Newspaper«, of which The Blue Blouse group attained the most fame. Das Rote Sprachrohr and Rote Fahne, two allied agitprop groups in Germany, had similar noise initiatives.

These eccentric noise orchestras survived until the mid-1930s. However, they gradually shifted from small avant-garde theatres and agitprop brigades to larger proletarian masses, and appealed especially to the younger generation, for whom noise bands served as the initial step to musical education. It is remarkable that Eisenstein's former colleague and Proletkult actor Boris Yurtsev contrib-

uted greatly to this shift. In his plays for Proletkult and other pioneering theatres of the mid-1920s, he insisted on using the same instruments and adhering to Eisenstein's approach. According to Yurtsev, noise music as a simple organization of sound that requires merely everyday objects and work tools, and can even be made using trash, provides the best entrance into musical education. Thus, routed through ancient folklore and musical clownery, avant-garde sound art, and, in some ways, a taste for jazz, noise music entered the terrain of Bolshevik mass education. It fell on fertile ground, since rural traditions of amateur music-making had survived until that day. Another reason for the rapid growth of proletarian noise ensembles was the deficiency of professionally manufactured instruments, especially after the World War I and the Civil War. Amateur instruments meant to substitute for professional ones coincidentally conformed to the Marxist concept of overcoming the alienation from the products of labour, caused by specialization and division of work. Even more importantly, these amateur practices advanced »art into life«, by making no distinction between

everyday life and art, production and culture, work and leisure, musical instruments and working tools. In this regard, the amateur noise movement partly satisfied what was proclaimed in 1923 by the productivist theoretician Boris Arvatov, »that for the first time musicians hadn't a desire to organize artificial non-vital sound material, but material of life as such (street and factory noises etc.), noises of everyday life«.

The late 1920s saw the peak of these rural and urban amateur noise ensembles, whose repertoire might have included revolutionary marches, folklore songs, or even imitations of approaching trains or an iron factory, as took place in Moscow in the First Experimental School in honour of Karl Marx. Throughout the second half of the 1920s, some musical educators published a small number of hand-outs for those involved in amateur noise activities. These hard-to-get brochures remain a basic resource on instrument construction. Some of the most exotic and acoustically advanced are presented in the Berlin version of the »Generation Z : ReNoise« exhibition.



The Music Laboratory performs »Steam Train«, playing noise instruments devised by Vladimir Popov for the staging of *Anna Karenina* in 1937, Moscow, 2013. Photo: N. Cheban.

The evolution of noise practices in the first years of the Soviet Union, however, would not be considered accomplished had there been no revival of the early Proletkult projects, a revival that occurred with the advent of sound in film in the early 1930s. Apart from Dziga Vertov's field recordings (particularly his recordings of industrial sound sources, best represented in his celebrated 1930 film *Enthusiasm*), another noise method, which became quickly outdated, was to create soundtracks by theatrical means resembling a more complex version of Foley art. In the »Generation Z : ReNoise« exhibition, this method is demonstrated in two movies: Boris Yurtsev's *An Elegant Life* and Alexander Macheret's *Men and Deals* (both 1932). Acoustically, Yurtsev and Macheret attempted to restore the noise utopias of the early 1920s. It is thanks to their efforts that we may still witness today how noise orchestras (especially the industrial ones) might have sounded in Proletkult, Mastfor (in which Macheret acted), or The Blue Blouse (where Macheret supervised one of its groups in the mid-1920s).

There is no doubt that the experiences of Yurtsev and Macheret in avant-garde and agitprop theatres laid the foundation for their »industrial symphonies«, admittedly impossible without contributions from one of the leading experts in theatrical sound design – Vladimir Aleksandrovich Popov (1889–1968). Throughout his career as an actor in the MKhT (Stanislavsky Moscow Art Theatre), Popov was encouraged by Stanslavski to invent various devices that could give more vivid sound impressions on stage as early as 1908. Throughout the next decade, the number of his inventions increased, so that by the 1920s they shaped the sound of plays presented by MKhT-2, Vakhtangov Theatre, or Gabim Jewish Theatre. Popov not only brought existing devices up to scratch, but also worked as a true originator of hundreds of machines, from simple handy devices to complex machines such as pipe organs, which produced sounds through factory and steam engine whistles. What is perhaps more important is that special brigades, supervised by Popov himself, staged the »noise symphonies« for each production, so that they were regarded not as mere sound effects, but as characters onstage. His thorough approach to noise production made

Popov's undertakings indispensable for sound movies, particularly where rich and complex soundtracks were needed, as the natural environment in those days could by no means be reproduced perfectly through sound recordings. Moreover, since »noise symphonies« had to be composed rather than recorded, versatile sound textures were created, such as the one from the »Battle on the Ice« scene in Eisenstein's *Alexander Nevsky*.

The »ReNoise« section of the exhibition offers an opportunity to examine some of these devices, mainly constructed to reproduce industrial and machine noises, and also try them out. As was the case at the major exhibition at the Polytechnic Museum in Moscow in 2012 as well as other venues, visitors are invited to compose their own soundtracks. Screened performances by The Music Laboratory and a workshop leading to a live performance exemplify contemporary usages of these machines. The performance will connect both amateur and »professional« noise making, thus making them historically and aesthetically coherent. Unexpectedly, early Soviet noise machines recreated by the group of musicians, stage designers, and researchers resemble modern sound installations, demonstrating the continuity of utopias of the past and contemporary sound practises.

ReNoise is a project by Peter Aidu, Konstantin Dudakov-Kashuro, and Evgenia Vorobyeva.

*) »The Music Laboratory« is a group of musicians and researchers in Moscow, who, over the past five years, have been studying various early Soviet sound ventures, reconstructing instruments and performing the music of the time.

Tank sound device, invented by Vladimir Popov. Photographer unknown.



Peter Aidu is a musician, curator, and the head of The Music Laboratory. A laureate of several international contests, he teaches piano, harpsichord, and chamber orchestra groups at the Moscow Conservatory. In 2007 he established The Piano Shelter – a collection of specially conserved pianos. In 2009, Aidu with The Music Laboratory initiated the revival of »PerSimfAns – Symphony Orchestra without a Conductor«. He is the director of the performance project »Reconstructing Utopia«, and curators of the »ReConstruction of Noise« exhibition, which was shown in Moscow, St. Petersburg, Vladivostok, and other Russian cities.

Konstantin Dudakov-Kashuro is a scholar, assistant professor at Lomonosov Moscow State University, member of The Music Laboratory, and DJ. In 2006 he completed his Ph.D. in Cultural Studies, comparatively studying Italian Futurism and German Dada poetics. His main research interests – cultural philosophy, modernism, and avant-garde aesthetics – motivate his involvement in PerSimfAns, »Reconstructing Utopia«, and »ReConstruction of Noise« (together with Peter Aidu). He is a member of the European Network for Avant-Garde and Modernism Studies and The Centre for Avant-Garde Studies at the University of Iceland, and currently writes on the history of early Soviet noise music.

Evgenia Vorobyeva studied at the P. I. Tschaikovsky Conservatory in Moscow, where she currently holds the position of director of the Department of Foreign Affairs. Since 2010 she is active as producer, manager, and curator of various projects, a.o. the exhibitions »Noise Orchestras of the 1920s. Unknown Proletarian Music« at the Moscow Jewish Museum, and »Reconstruction of Noise« at the Moscow Polytechnical Museum.

OVERLOOKED PROGRESS

BY ROBERT MIESSNER

The focus on East European electronic music within CTM Festival's 15th edition not only highlights Russian and Soviet sound pioneers via the »Generation Z : ReNoise« programme, but also Ion Dumutrescu and Rodion G.A., who represent two generations within Romanian electronic music history. Moreover, the creative minds behind the »Sound Exchange« project have come up with a broad spectrum of experimental music from Central and Eastern Europe.



The Positive Noise Trio's stage set-up at Kunstsammlung Chemnitz during the Sound Exchange festival Chemnitz, November 2012. Photo: Igor Kulevsk

Breaks and beginnings

An anniversary, one may safely presume, in not just any calendar: the release of »Haunted Pair« in East Berlin in 1984, a split tape from the bands Aufruhr zur Liebe and Ornament & Verbrechen. »Release« perhaps overstates the case in fact, for old Mireille Mathieu cassette tapes had to be recycled to produce this exceedingly limited edition. An X-ray-style painting of a couple of copulating moose adorns the cover of »Haunted Pair«, courtesy of Ronald Lippok, who had founded Ornament & Verbrechen with his brother Robert Lippok in 1983. There even existed a label – run by Ronald Lippok and Bernd Jesträm, then guitarist and singer with Aufruhr zur Liebe – and a catalogue reference: »Assorted Nuts No. 1«. »Haunted Pair« was not to remain the new label's only clandestine release for long.

Thirty years later, the tape is still a gem: Aufruhr zur Liebe's side offers-up a mild dose of rainy-day avant-garde wave, including a cover of T-Rex's »Children Of The Revolution« along with »bock auf nichts«, a decidedly skewed punk rendering of the eponymous poem by East Berlin poet Stefan Döring. Ornament & Verbrechen launches its side with »in g«, synth sounds and song, equally cool, and shot through with orchestral drama. The band follows up with »Duchess of Prunes«, a loose adaptation of Frank Zappa's »Duke Of Prunes«, itself a psychedelic template from which Ornament & Verbrechen distilled every eerie moment.

Thus »unerhörte Musik« (unheard-of music), as Susanne Binas-Preisendörfer, ex-member of another East Berlin experimental band, Der Expander des Fortschritts, describes it in the companion book to the »Sound Exchange« Festival, and, one must add, music all too rarely heard. In the 1990s Ornament & Verbrechen morphed into the internationally successful electronic line-ups Tarwater (Ronald Lippok and Bernd Jesträm) and To Rococo Rot (both Lippok plus Stefan Schneider). If one points out the origins of these bands, to their fans from the UK for example, one is mostly met by disbelief; yet that cedes to enthusiasm as soon as the guests get to listen to the older tapes. As is often the case, there is little relation between the quality of the tapes and the extent of their renown.

To amend this state of affairs was and remains the declared intention of the »Sound Exchange« event series conceived by Carsten Seiffarth, Carsten Stabenow, and their not-for-profit association DOCK e.V. »There's a gaping twenty-year hole in history to fill«, says curator Seiffarth, in succinct appraisal

of the fact that the West, as far as he can see, was interested in contemporary music from Central and Eastern Europe only briefly, in the early 1990s, after which »interest literally evaporated«. Yet in 1988, by contrast, Chris Cutler (Henry Cow, Art Bears, Pere Ubu) had initiated a series of seven albums in total, to be released on the ReR Megacorp label (ReR) as a survey of the experimental scene in Central and Eastern Europe. Cutler launched the series with *Ritual Nova 2*, an album by Yugoslav composer Boris Kovač, and followed up in 1989 with ZGA's *Riga*, Strannye Igr'y's (Strange Games') *Leningrad*, and Expander des Fortschritts' eponymous debut. Then in 1990 came *Up The River* by the Polish band Reportaż; and in 1991 *Currents Of Time* by Slovenian Borut Kržišniks (still Yugoslav at the time), as well as *Levitacion* by Hungarian Kampec Dolores. The series, titled »Points East«, just as the sub-label founded for the very purpose of publishing it, is due to be re-released, possibly later this year. The delay to date surely brings no joy to the label and illustrates the truth of Seiffarth's statement.

How did things reach this point? A rather less-than-sympathetic attempt at an answer would be the question: How does the existence of an experimental music scene fit into the West's image of Central and Eastern Europe, an image shaped after all by the forty-year-long Cold War? Briefly put, the question is: were those Commies allowed to experiment? Yes, they were allowed. And, equally true: no, they were not. Their history is one of progress obliged at times to pursue a zigzagging course and therefore often overlooked. Ornament & Verbrechen were able to release their handful of official recordings only after 1989. Yet the territory between East Berlin, Riga, Vilnius, Bratislava, and Warsaw has always been heterogeneous. Compare the fact that the Electronic Studio at the East Berlin Academy of Arts first opened in 1986, while the Experimental Studio of Polish Radio in Warsaw opened in 1957.

On the other hand, it was only two years after the Warsaw Studio's opening, that is, in 1959, that Gerhard Steinke, former director of the (since demolished) Central Bureau of Radio and Television (RFZ) in Adlershof in East Berlin, initiated a team led by Ernst Schreiber to develop the Subharchord, an electronic sound generator designed specifically for use in experimental respectively electro-acoustic music production and in radio, film, and TV studios. A shift in cultural policy put an end to the experiment in 1969. In 1973, by contrast, Polish composer Bogusław Schaeffer was able to develop his composition »Synthistory« in Belgrade. Schaeffer



The First Latvians on Mars performing, »Dein Bart in Zeit und Raum: Für Hardijs Lediņš« at Wellecho during the Sound Exchange festival Chemnitz. Photo: Igor Krakowiak.



NSRD, concert performance, Riga, mid 1980s, (Hardijs Lediņš, Juris Boiko). Photo: unknown

fer was there at the invitation of Vladan Radovanović, himself a composer as well as director of the Electronic Studio at Radio Belgrad where sound engineer Paul Pignion mastered »Synthistory« on the legendary Synthi 100, the technology that Peter Zinovieff had developed at the EMS Studio in London. Only a few such instruments were ever installed in the electronic studios of European radio stations yet, even so, a total of two were located in the Eastern bloc capitals of Sofia and Moscow, and one in the Eastern bloc's non-aligned capital, Belgrade.

Not far from there, not even 100 km to the northwest, in Novi Sad, Ernő Király, a Yugoslav of Hungarian origin, created his first electronic composition »Poema o zori« as early as 1960. Király, who died in Serbia in 2007, wrote and played music inspired both by avant-garde music of the West and the folklore and cultural diversity of his native Vojvodina. Radio Novi Sad commissioned him to document the music of Hungarians, Serbs, Croats, Slovenians, and Roma, and his interpretations of such sources proved increasingly experimental.

Király also designed and built his own instruments: the »Zitherphone« consisted of five variously sized and electronically amplified zithers; the »Tablophone« of a sheet of metal to which could be attached objects to create various sounds and a sheet of paper for drawings. For Király relied not only on classical notation for his compositions but also developed a personal notation system based on geometric figures and primary colours. His sheet music and composition notebooks are hence artworks in their own right. His discography must be considered in the light of a catastrophic political schism. In the relatively liberal cultural-political landscape of Yugoslavia between 1967 and 1991 he was able to release four albums, three of which are no longer available. Following the outbreak of civil war in Yugoslavia, a further two albums were released... but abroad: *Phoenix: The Music Of Ernő Király* on ReR Megacorp and *Spectrum* on the French label trAce.

Sound Exchange: Kraków – Chemnitz – Berlin

Such stories have the makings of one book at least. And it was the wish to produce that book which led ultimately to the »Sound Exchange« Festival. The Goethe-Institutes in Munich and Prague had sent Halle-based musicologist Golo Föllmer off to research sound and media art in Central and Eastern Europe – and he thus had ample opportunity to meet a great number of colleagues, composers, and event organizers. The book was never funded. Instead, the research gave rise to an ambitious series of events.

Given the aforementioned breaks and schisms, to mirror the past and present of experimental music in Central and Eastern Europe in a series of concerts, in a festival format, initially seemed like a hopeless task. First of all one had to ask: What is »experimental music«? The »Sound Exchange« curators opted for a broad definition, gathering electroacoustic music, both composed and improvised, musical media art, and audio art under this umbrella term. They threw in several trips to the margins of popular-experimental sound production, for good measure. And they let locals select the participating artists.

Things kicked off with a one-day »Sound Exchange« event in Kraków on 18 November 2011, a format then repeated over the next twelve months in Bratislava, Vilnius, Riga, Tallinn, Prague, and Budapest. The tour ended provisionally with a weekend-long festival in Chemnitz – a city chosen, Carsten Seiffarth explains, because »[it] is not overly burdened by academic music history«. More pertinently, perhaps, Karl-Marx-Stadt (as the city was called in the GDR) is home to legendary East German underground bands and projects such as Die Gehirne, Kartoffelschälmaschine, and AG Geige. Founding member of the latter band, Frank Bretschneider, founded the Rastermusic label in the 1990s together with

Olaf Bender, and later joined forces with Carsten Nicolai's Noton to create raster-noton – the name that put Chemnitz on the electronic music map, worldwide and for all time. Bretschneider came to that first »Sound Exchange« weekend festival and performed »Kippschwingungen«, an audio-visual concert inspired by the sounds of the Subharchord.

With him in Chemnitz were the Hungarians Pál Tóth, alias én, and The Positive Noise Trio led by Zolt Sörös, who each devoted their performance to Ernő Király. Whereas Pál Tóth melded Király's compositions, sounds, fragments, and melodies to an evocative audio collage The Positive Noise Trio presented excerpts from Király's »Flora« cycle in a manner reminiscent of John Zorn. The booklet containing the cycle's graphic scores was on display in the parallel (yet longer-term) festival exhibition entitled »Visible Music That Anybody Can Listen To«, along with scores by Fluxus artist Milan Adamčiak, the great old man of Slovakian sound experiments. Adamčiak turned up in person for the Ensemble Mi-65's rendition of his work, which went under the title »TRANS music [VARIATIONS]«. The ensemble's interpretation filled the room with a protracted deep bass tone that yet seemed not at all heavy, mingled as it was with multiple strands of shimmer and crackle.

And then in rolled Łukasz Szałankiewicz from Poznań, a member of the Polish Society for Electroacoustic Music, historian, sound designer, and electronic musician, with Bogusław Schaeffer's »Synthistory« in his luggage. At one point, one could detect the sound of some clockwork collapsing. Szałankiewicz thereupon played his own version of »Synthistory«, namely »Signalstory«: a real pumping loud, high- and low-frequency performance from within the magnetic field of a bunch of Walkmans. A multimedial concert whose aesthetics recalled the electronic excursions of the Brit group Coil was performed under the title »Dein Bart in Zeit und Raum« (Your Beard In Time and Space) by Latvian artists Andris Indāns, Stropu Jurka, Normunds Griestiņš, Toms Auniņš, Anna Kirse Aunina, and Indriķis Ģelzis, in memory of Hardijs Lediņš, the architect, pioneer of electronic music in Latvia and founder of the »Workshop For The Restoration Of Feelings That Never Were«, who died in 2004. This programme item gave rise to the combo The First Latvians On Mars. From neighbouring Lithuania came the DISSC-Orchestra: Jonas Jurkūnas, Antanas Jasenka, Vytautas V. Jurgutis and Martynas Bialobžeskis. They played their composition »Venta« on Soviet synths: a performance that led one of those present to dub it »The Great Analogue Hurricane«.

It is to be hoped that this hurricane inspires others, further a-field. Central and Eastern European literature and cinema already have their readers and viewers. Experimental musicians in the region do not lack an audience either, although theirs is much smaller. But this musical culture, like its counterpart in the West, is by its very nature unlikely ever to attract large numbers. Numbers are in any case not the decisive point. If the broader public would only realise that Central and Eastern Europe's contribution to music consists of more than Eurovision Song Contest acts and folkloristic live-cell therapy, we could already speak of heady progress.

Ornament & Verbrechen, the DISSC Orchestra, The First Latvians on Mars, én aka Pál Tóth, the Ensemble Mi-65, and Łukasz Szałankiewicz – and, with them in spirit, Bogusław Schaeffer, Ernő Király, Milan Adamčiak and Hardijs Lediņš – can all be experienced live this year at the 15th edition of the CTM Festival. In addition, Claus Löser (Die Gehirne, Chemnitz; now at the Brotfabrik, Berlin) and Alexander Pehlemann have compiled a programme of screenings about underground bands in the GDR under the title »Spannung. Leistung.Widerstand. Filmbanduntergrund DDR 1983-1990«. Pehlemann has been putting his energy into countering memory loss for some years already – among other things with the almanac *Zonic*, the 20th edition of which he recently published. And, last but not least, Ronald Lippok, Bernd Jesträm, and the poet and musician Alexander Krohn recently released the CD *Dear Mister Singing Club*. Lippok once again took care of the artwork while poets such as Jochen Berg, Stefan Döring, Clemens Kuhnert, Andreas Paul, and Bert Papenfuß supplied the texts. In autumn 2009 the full line-up of Ornament & Verbrechen, who often used to set Papenfuß's lyrics to music, played a reunion concert in Leipzig while, for the »Sound Exchange« gig at CTM, the original duo will take the stage: Ronald Lippok (drums and sampler) and Robert Lippok (guitar and electronics). The title »Béton Brute« says it all. We are talking about breaks and schisms, but also about continuities.

Translated from the German by Jill Denton.

Author and journalist **Robert Mießner** was born in East Berlin in 1973, and studied history, philosophy, and library science at the city's Humboldt University. He writes on music and literature for newspapers, magazines, and collections, and is co-editor of the *Gegner* magazine and the *Zonic* almanac.

*** www.robertmiessner.wordpress.com

COSMIC FLIGHT ELECTRONIC POP MUSIC IN THE GDR

BY FLORIAN SIEVERS



Concert by Julius Krebs at Alexanderplatz, Berlin.

Between 1981 and 1989 a small circle of around twenty musicians published a dozen electronic pop LPs in the GDR. Such recordings ensued from a string of chance incidents, thefts, daring ideas, and creative misunderstandings. They amount to a branch on the evolutionary tree of electronic music that has almost been forgotten, and yet on which a few obscure yet pretty sounds once blossomed.



Reinhard Lakomy in the studio.

The old, yellowing photographs all look remarkably similar: the centrepiece is mostly a line-up of musicians behind one or two towers of synths and a crowd pushing up in front of them or squeezing into whatever gaps it can find. It is almost always a big crowd, be it a sweaty horde in some concert hall in deepest Saxony, or spilling out from the packed auditorium of Berlin's Palace of the Republic; or perhaps a sea of faces flooding from between the monumental Stalin-era buildings on Strausberger Platz in the former capital of the GDR. If these old photos are telling the truth then all of these were big events, some of them very big indeed. From the early 1980s onwards, live performances of electronic music were pretty sure to attract masses of people; masses who presumably wanted to dream and be blown away.

The country in which these masses lived must surely have felt rather limited, circumscribed as it was by impenetrable borders. How large wide and infinite the cosmos stretching above it seemed in comparison! Musicians and fans therefore began one day to flee this limited country for the endless reaches of outer space. Not in reality, of course, for Soviet »Energia«-brand rockets and »Soyuz«-spacecraft were hard to come by. Synthesizers, drum computers, and samplers were their means of flight and it was these which gave rise to the GDR's whimsical, dreamy, expansive electronic pop music, and allowed musicians and their listeners to escape »real-socialism« for wildly pulsating fantasy landscapes and the infinite realms of far-flung galaxies - or at times simply the palpable pleasures of a local disco that nonetheless appeared to be on a space station circumnavigating planet earth on a geo-stationary circuit.

The East German scene that produced such music from the early 1980s onwards was very limited. Yet the circa twenty synthesizer geeks who belonged to it were all pros with impeccable musical training: Reinhard Lakomy, for instance, sadly deceased in spring 2013, was renowned above all for rock albums and recordings for children. Then there were bands called Pond, Key, Servi, or the like, which have mostly since sunk into oblivion. And even paragon rock band The Puhdys couldn't resist releasing an electro pop album in 1982: *Computerkarriere* (Computer Career), a crossover of experimental synth instrumentals and Neue Deutsche Welle (aka New German Wave or NDW). Between 1981 and the demise of the GDR nine years later, East German electro musicians released around a dozen albums in total, mostly solo endeavours.

But this small scene had nothing in common with the academic electronic-electroacoustic contemporary music being explored at the time in the studios of radio stations and universities throughout East and West Germany, nor with the experimental, electronica-influenced underground sounds produced from the mid-1980s onwards by »anderen Bands« (different bands) such as AG Geige, Sandow, and Ornament & Verbrechen. Electronic pop musicians' role models were neither Stockhausen nor Einstürzende Neubauten but rather Vangelis, Jean Michel Jarre, Ash Ra Tempel, and Klaus Schulze, at times also Genesis, Pink Floyd, Emerson, Lake and Palmer and, first and foremost, Tangerine Dream. »I watched Western TV in secret just like any other guy and sometime in the mid-1970s I saw a show that featured Tangerine Dream making music in a castle in England« Reinhard Lakomy told me when we met in 2010. »Sounds, rhythms, and sequences such as I had never heard

before. It just blew my mind«. Lakomy, born in 1946, was already a successful musician in the GDR at the time - and in 1981 he became the first to release an album of electronic music: *Das geheime Leben* (The Secret Life).

The West Berlin electronic band Tangerine Dream had accepted an invitation from DT64, East Germany's radio station »for young people«, to play live in East Berlin's Palace of the Republic on 31 January 1980 - the first West German pop band ever to do so. Many of the electronic musicians who later enjoyed success in the GDR were there that night, as fascinated as they were inspired. »Tangerine Dream didn't use lyrics actually, so the band initially seemed apolitical - I think that's why they were allowed to play in the East at all«, muses Wolfgang »Paule« Fuchs, who was born in Berlin-Prenzlauer Berg in 1948, and became the most commercially successful electronic musician in the GDR thanks to his Pond project. »Then I came across a photo of Klaus Schulze seated on the ground, dressed in a space suit and helmet, and completely surrounded by keyboards. »Wow!« I thought. »We'll do that too.«

On the trip... but behind the times

When Tangerine Dream played the Palace of the Republic in 1980 many East German musicians were already vaguely familiar with cosmic music and krautrock, genres that musicians in West Germany had been exploring throughout the previous decade. Although officially prohibited from listening to Western Radio most of them tuned in regularly to West Berlin shows, such as »Steckdose« (subtitled »Computer Music - Music Computer«), which featured interviews with Tangerine Dream or Klaus Schulze and presented new synthesizers and other novel gadgets. Bootleg cassette recordings circulated »underground«. Then in 1986 the youth radio station DT64 began broadcasting its »Electronics« programme and organizing live music festivals. Thus East Germans could at last follow the scene quite legally. It must be added, of course, that when Tangerine Dream played in the GDR and so inspired East German musicians, the band's heyday and that of its musical genre were practically over in the West. East Germans were behind the times when it came to the electronic trip because the »real-socialist« regime strictly controlled cultural production and had branded electronic music »inhuman«. But sometime in the early 1980s the powers-that-be decreed that the future lay in »Kleincomputer« (microcomputers) - and therefore gave the green light for the music these were able to generate, which at the time did indeed sound futuristic.

However, this didn't mean that just any GDR citizen could now launch a DIY freelance career, recording, releasing, and performing electronic music. A permit from the state was still required. Julius Krebs, who was born in 1954 and gave solo performances of his project JSE (Julius Krebs - Sinfonische Elektronik) in East Germany, says: »There were two kinds of pop musician in the GDR - amateurs and professionals. Both first had to demonstrate some talent and were only then given a permit to perform, a permit that also specified the hourly rate they could earn. Without a permit one couldn't even grab a guitar and play on the street. That was strictly forbidden.« A commission examined an artist's musical skills, lyrics, appearance, and repertoire. And anyone who intended to earn

a living as a professional musician needed a further special license. »In the West, lots of electronic musicians tinkered about in their home studios«, says Hans-Hasso Stamer, who was born in 1950, studied computer science in East Germany, and spent his student days building synths and pimping Western equipment with which he then performed live. »It was different in the GDR. Anyone who hadn't officially studied music but wanted to release something on vinyl first had to play for years so as to prove his or her skills and reliability. So there was no greater accolade than to finally be allowed to release an LP.«

Only one state label existed in the GDR for LP releases in the popular music sector, namely Amiga, which was operated by the »People's Own Enterprise« (VEB) Deutsche Schallplatten Berlin. No one other than selected musicians was allowed to publish LPs, and these always retailed, moreover, at the uniform price of 16.10 Ostmark. Production material was in short supply and this limited both the frequency and number of releases. »But sales didn't matter a damn in the GDR, to be honest«, explains musician Rainer Oleak, who was born in 1953 and collaborated with Reinhard Lakomy on the electronic LP *Zeiten* (Times) in 1985. »A lot of stuff didn't sell well for the simple reason that too few copies were available. But in any case, most musicians made their living from live gigs.«

Masters of hidden meanings

Although record releases in the GDR were subject to censorship, the electronic music discussed here was generally purely instrumental and therefore unproblematic in this regard at least. Yet many of the records may nonetheless have conveyed hidden meanings - East German artists were not infrequently masters of this art. For example, in 1983 Reinhard Lakomy named his second electronic music LP *Der Traum von Asgard* (The Dream of Asgard), with liner notes that rambled on about how »One used to say Asgard, by which one meant unlimited freedom in simultaneous comfort, meant love without hate, meant permanent abundance«. The lyrics hence possibly referred to the »Golden West« so longed for by many citizens of the GDR. Yet whoever took a closer look was able to see that »the points of the golden spears are bent, the panelled floors full of stains, and the precious gems no longer in their settings«. The West was not as golden as it was made out to be, after all. And one track on Lakomy's first album is entitled: »Es wächst das Gras nicht über alles« (Some things one never gets over) Is this perhaps a subtle political statement? »Nonsense!« replied Lakomy in a booming voice, as self-assured as ever when I asked him shortly before his death. »It's simply an eternal truth.« Yet most other members of the electronics scene lower their voices even today when talking about being under surveillance by the East German secret police - the dreaded »Stasi« - or about other repressive measures taken back then by the state such as censorship, for example, which musicians to this day call »proofreading«.

These were obstacles faced also by the musical duo Servi, for example, which had first seen the light of day in 1975 as a Christian rock band and eventually switched to performing meditative ambient music in churches. »Church work was always a means to oppose the ruling regime«, says Jan Bilk, born in 1958 and one half of Servi. »We were a church band at the time. We played every weekend in various parishes, giving concerts of meditative electronic music as well as accompanying church services on Sunday mornings. We had to play quietly and without drums. We didn't want grand-

mas, keeling over in the pews. For that reason, but also because we lacked the energy at some point to engage in endless discussions about our lyrics, we began doing purely instrumental stuff in 1982.« According to Bilk, Servi was never aware of being subject to repression - everything ran normally. »Yet: What is normal?« he asks now. »We had nothing with which to compare our experience, and therefore no idea of how different things might be elsewhere. All we knew was that there was a wall somewhere, which put a limit to what we could do. For example, we often couldn't get a permit when we wanted to play some place. We'd sit around in a bureaucrat's office, usually for an hour or so, and then an official would turn up and hem and haw about some problem or other... And that would dash a whole year's hopes in one go. It was like ubiquitous fog. For sure, fog won't kill you, and you may even get along quite well in a fog; but fog seriously limits your vision.«

In 1986 Servi finally released its debut LP *Rückkehr aus Ithaka* (Return from Ithaka). It was the first ever sound carrier officially on sale in the GDR yet recorded not by the state but by a private producer. »Produced by SERVI« is clearly stated on the back of the album sleeve - and so it was a real sensation! The hand of the Church was protective at least in some respects, for it not only facilitated such new developments but also helped Servi get hold of equipment. Bilk's memory of being handed a brand new Moog Prodigy compact synthesizer in Bautzen in eastern Saxony is still fresh in his mind today. A Jesuit priest had made a special collection in his parish in Cologne then dispatched the equipment to Servi.

However, other East German electronic musicians had to scheme like mad in order to get hold of Japanese or American top-brand synthesizers or drum machines and smuggle them into the country. No one wanted to have to play the few local products available: the Tiracon 6V from the VEB Automatisierungsanlagen Cottbus (Automation Works), for example, or the Vermona-brand equipment turned out by the VEB Klingenthaler Harmonikawerke. All such equipment was doomed to break down. But the (generally illegal) import of Western equipment could succeed only with the help either of fellow musicians in possession of a travel permit for performances abroad (so-called »travel cadres«), or of befriended old age pensioners (because retired East Germans were allowed to travel abroad), or through contact with Western journalists and diplomats. »To get hold of Western equipment one first had to raise the dough, i.e. to exchange Ostmark for hard currency«, tells Paule Fuchs. »Which was illegal, of course. An exchange rate of one to six or seven was normal, but sometimes you'd get one to ten. And then you still had to find someone who'd bring the equipment over the border for you. Many people demanded payment for that so a synthesizer could end up costing around 40 000 Ostmark. To put that in perspective, my mother earned 400 Ostmark a month back then.«

Fuchs' colleague Julius Krebs can still remember how the Chinese wife of a member of one of his early bands held a passport that enabled her to cross the border into West Berlin every day. The couple thus managed to import numerous pieces of equipment and this was how Krebs himself acquired some of his gadgets. »As far as I know I was the first person in the GDR to ever own a Commodore C64 and to play a Roland TB-303 live on stage,« he recalls. »I used an old Soviet TV as a monitor for the C64. But those computers were terrible - they crashed constantly. One of them once crashed seven times during a single concert. Which means the monitor suddenly displayed nothing but hieroglyphs while the synths all emitted

the same single note. What does one do then? Well, one plays on manually while discreetly rebooting the computer! That fascinated people actually, because they could see the amount of work it took. They too could feel the tension - and they knew the sounds were being created, calculated, at that very moment.«

Wary of the playful appropriation of signs and codes

The records released under these adverse conditions between 1981 and 1990 do not belong to any canon of electronic music. They are an almost forgotten branch on the evolutionary tree of electronic music - and yet a branch on which a few obscure but wonderful sounds once blossomed. They amount to a string of skillful thefts, daring ideas, beautiful coincidences, and pretty misunderstandings. A selection of these releases can be found, for example, on the compilation *Mandarinträume - Electronic Escapes from the German Democratic Republic 1981-89*, released in 2010 on the Munich label Permanent Vacation. It features endless synthesizer epics that seem to tell of trips to far-flung galaxies as well as ambient tracks that conjure dreams of nudist beaches on the Baltic Coast. One also finds disco tracks drenched in the heartbreaking pathos of electric guitar solos, as well as weird and wonderful forms of cosmic disco, despite the fact that none of the musicians involved had ever spent time on the shores of Lake Garda in Italy, where the latter genre originated. And the compilation also presents a prolific number of psychedelic krautrock jam sessions, which it is difficult to believe were created in the absence of drugs - although all participants swear by it. »We honestly didn't have any drugs at all«, claims Paule Fuchs. »I was part of that scene for aeons yet I cannot recall a single case. Where would anyone have gotten hold of drugs? All we had was alcohol.«

These records also hold an aesthetic surprise in store. Although produced in a country that heralded mechanical engineers and cosmonauts as heroes, and that was filled to the gills with an optimistic faith in technology - or rather in the interplay of personal diligence, science, and technology as a means to improve people's lives and ultimately establish communism - the records contain no music that is emphatically reminiscent of machinery. Official LP production in the GDR thus bears no trace of the influence of Kraftwerk or of the industrial music of the period. The irony inherent to them and their playful appropriation of signs and codes likely made people wary.

A cross break

The »Wende« (political turnaround) that began in 1989 represented a cross break in the biographies of these electronic musicians and indeed of all citizens of the GDR. At times, not even a glimmer of public interest in Eastern bloc music persisted. »The events of 1989 and thereafter swept away everything that had ever had any value in the GDR, and everything we had ever held dear, and our biographies were all pretty much dismissed as inferior« Reinhard Lakomy told me, with some resentment. Both professionally and privately, he and a very few of his colleagues survived the collapse of the regime under which they had grown up relatively well. But not everyone was so lucky. »During the Wende everything disappeared in a kind of maelstrom«, recalls Hans-Hasso Stamer. »Either one could find the energy to say, »Ok, that's that: time to start again from scratch« or one couldn't. And I'll tell you quite frankly: I couldn't. For a while I did nothing but write poetry.«

Today, Stamer, Krebs, Fuchs, and those of their colleagues who are still alive, all live in or near Berlin. To visit them one has to head for the far reaches of the public transportation network, travel to the end of the lines, into the endless, peripheral, non-place landscapes comprised of motorway junctions and hardware stores, derelict industrial buildings in which every single window has been meticulously smashed, and rows of allotments enclosed by neatly trimmed hedges. For some of these musicians or ex-musicians, the recordings of electronic music from »way back when« are the most important thing they have ever accomplished in their lives - for others, only a small, almost embarrassing gaffe. Some of them make good money today. Others barely keep their heads above the water. Whatever the case, their history should not go untold.

Translated from the German by Jill Denton.

Journalist [Florian Sievers](#) writes about cultural affairs, primarily architecture and music, for *Spex*, *Groove*, and other magazines. In 2010 he compiled *Mandarinträume - Electronic Escapes from the German Democratic Republic 1981-1989* for the Permanent Vacation label. The CD features electronic music created by various artists in former East Germany.



Musician license of Julius Krebs.

ERKKI KURENNIEMI



Erkki Kurenniemi in the electronic studio of Helsinki University in 1971. Photo by Martti Brandt.

Erkki Kurenniemi Archive, Unknown photo depicting the DIMI-A synthesizer, 1970s. Photo courtesy of the Finnish National Gallery.



DIMI-A DIGITAL MUSIC SYNTHESIZER
WITH ASSOCIATIVE MEMORY

»Only now starting with the [vin rouge de] Midi. Read Lucretius in the afternoon. Watched the porn video I made with X yesterday and after that, the noise on the screen. I could see molecules and particles.«

----- 5/7/1987 0:07

Born in Finland in 1941, Erkki Kurenniemi was an engineer, inventor, experimenter, musician, and artist, whose influence is most sharply felt in his impact on electronic music. He predicted that on 10 July 2048 he will be digitally resurrected from the diaries, sound recordings, and videos he made, eight years after this becomes technologically possible.

Tagged the »Marshall McLuhan of the Finns«, Kurenniemi held strong views on the future of technology and the human body. In an article he wrote in 1971, titled »Message Is Massage«, he predicted an all-in-one personal device that linked together our computer, TV, phone, video and audio recorder, books, magazines, newspapers, calculator, calendar, cinema, and our human relations - roughly speaking, an iPad. He also built a video and motion based synthesizer, which can now be replicated by Microsoft's Kinect, and conceptualized something close to presets in 1967. He recorded and archived the minutiae of his life much like the way we use Facebook and Twitter today, and yet, it wasn't until 1974 that he was able to buy an early pocket calculator. He bought his first computer in the early 1980s. In 1982, he wrote:

»I have owned a PC for twenty months now. In those twenty months, the machine has become part of me (or I of it).«

Kurenniemi's ideas are often radical, technotopian solutions. In 2004 he wrote an article for the Finnish art magazine Framework, in which he suggested the solution to sustainability on our planet was to turn it into a museum:

»In 2100, for example, print 10 billion »Earth licences« and distribute them to all the then-living humans. No more licences will ever be printed. Licences can be sold. This way, the people who want long life and long-lived children can have them, but only by migrating into space. This will be cheap, because there will be people wanting to stay down here, purchasing Earth licences at a price that will amply cover the price of the lift into orbit for the seller.«

Complex socio-political considerations offer no barriers: one stark, radical and (frankly, unrealistic) catch-all seemed more obvious. Kurenniemi is very much the product of his generation, an avid consumer of news, literature and

writings, who read Thomas Pynchon's *Gravity's Rainbow* decades before it was published in Finnish. His futurology, like his earth museum idea, has parallels with Kurzweil's singularity and Alvin Toffler's *Future Shock*. Macro solutions and predictions, without micro considerations. Kurenniemi's visions lie somewhere between fantasy and reality, in a technotopian future reality, and while he made countless notes, tapes, and videos documenting his life, he was not a completist. His records are unorganized notes committed to paper, which slide between English, Finnish, and maths, along with video and audio recordings, photographs, newspaper cuttings and receipts, and it is these from which the resurrected post-singularity Kurenniemi will re-emerge. Some days he made diary notes every ten minutes, some far less. His mathematical workings have not yet been analyzed, and so remain a mystery. Video diaries, many of which are homemade sex tapes, zoom in on genitalia, or have the subject looking at the camera rather than the cameraman. Audio often seems inconsequential - Kurenniemi singing to himself in the car, or the sound of a train journey, songs from the radio.

»I record everything manically, with neurotic attention to detail. I film incessantly with my cell phone, constantly taking notes, updating them by the minute. The things I record are trivial: the price of a cup of coffee, the kind of people that hang out at a particular bar.«

The body for Kurenniemi - bodily functions, feelings, sensations, and their extremes, mental and physical - were what Kurenniemi was primarily concerned with. He writes of having a rush from masturbation, closely followed by a thrill of a new discovery or progression with one of his projects, or conflates physical pleasure with machine interaction:

»The camera is more important than you or me since it constantly makes imperishable history of both of us. We feel »the wing of history« touching us and go crazy.« (1990)

Kurenniemi's body is intertwined with his recording devices, felt as rushes of pleasure in a mirror of the physical. He saw the human body as an organic slime machine, but what will the machines make of the organic slime of physical pleasure, orgasm, drunkenness, and pornography, and how will it be understood by his new, digital self? He lists

Erkki Kurenniemi performing, 1970s.



Kurenniemi's original tapes with their scarce markings. Photo: Kai Lassfolk.

Erkki Kurenniemi is showcased at CTM 2014 through a multi-part programme of concerts, lectures, and film screenings.

Jennifer Lucy Allan is one of two online editors for The Wire magazine. *** www.thewire.co.uk

meals and intake of wine, and physical (often sexual) pleasures, all mixed with calculations and ideas for future inventions and circuitry. Perhaps, to make an interpretative leap, Kurenniemi's apparent obsession with documenting his own pleasure-chasing is partly a result of him attempting to manipulate the outcome of his future self – a curation of his next self, a prioritization of content.

Rather than being hailed as a media theorist or transhumanist however, outside of Finland Kurenniemi is best known for his contributions to electronic music. While studying physics in the early to mid-1960s he built the first electronic music studio in the University of Helsinki. His future vision of a music studio was one where composition was completely automated in an integrated studio, where music was produced at the flick of a switch (which, if you consider the lengths to which it is possible to go with presets, is not so far off the mark). As such, the studio he built was one that diverged from existing studios in Europe, which were centred around analogue sound. He was more concerned with digital sound.

Kurenniemi built his Integrated Synthesizer in 1964, which operated as a control unit for the studio and contained a tone generator, audio filter, and mixing console. At this time, in other parts of the world, others were also building instruments and studios. In 1966 Don Buchla's Buchla 100 would hit the market, and Robert Moog had begun working, his first Minimoog released in 1970. Kurenniemi's instruments were largely concerned with digital sound, and brought the body into play as well. The DIMI-T translated brain waves into sound, and the DIMI-S, also known as the Sexophone, was a synthesizer operated by two or more players where the resistance of the human body completed the circuit and could control the sound. It works best when all players are naked.

Kurenniemi was both ahead of and behind his American and European counterparts; although concerned with digital sound, he failed to make a successful business out of his instruments. The company he set up, Digelius (a name derived from Digital Sibelius) was launched in 1970 with Peter Frisk and Jouko Kotila, but only lasted six years. Researcher and artist Jari Suominen notes that despite having a working prototype of the mixer and patch bay Dimi-X, Kurenniemi's was more concerned with pushing an integrated studio concept, the non-existent DIMI-U. At the time, Finland was also politically associated with Russia, and from the viewpoint of Western Europe, was considered to have one foot behind the Iron Curtain, which may not have helped sales.

The first instrument Kurenniemi's Digelius company attempted to sell was the DIMI-A (which still functions and has been played live, often by Mika Vainio). A synthesizer with digital memory, sounds can be programmed in, but are lost once the machine is switched off (which has to happen every two hours because of overheating). By the time DIMI-A was marketed though, it was competing with the EMS, and none were sold (although Kurenniemi ended up buying an EMS VCS3 for the Helsinki studio).

In the studio, Kurenniemi recorded tests and demonstrations, doodles and explorations, as well as complete compositions, and the occasional soundtrack (notably for Risto Jarva and for »Hyppy« by Eino Ruutsalo). The most famous of his pieces (and one of the longest), »On-Off«, from 1963, is an improvised electronic noise and tape composition made on the University of Helsinki's studio equipment, and is the earliest surviving composition from this studio. Kurenniemi cannot remember much of how he recorded it, although it uses spring reverb and echo. Distinctive sounds heard in many of Kurenniemi's

pieces, instead of reverberating into human spaces these echoes bounce off machine spaces, hollow and metallic. He would hit the machines, bringing himself into the compositions as a human body integrated with and affecting the machine output; a physical outburst that, while perhaps not quite fulfilling his dream of human-machine coupling, nonetheless incorporated physicality, urgency, and the organic body into the composition.

In part, hitting and moving machines was also Kurenniemi's reaction to academic electronic music, which he felt was too severe and serious. The direct energy transfer of fist to metal is converted into jolting irregular sound, giving his pieces a dynamism that more formal recordings from other studios did not have. While overloading machine signal paths, he was also busy overloading his own signal path in daily life via intoxication and sexual ecstasy. Where there is often a formal test-session-like fridity to some BBC Radiophonic compositions, Kurenniemi's works are frantic and loose, and it is this which distinguishes him from early electronic music pioneers. His reels lack proper markings and are annotated with tape speed, a name, and a numeric ID coding system that has not yet been deciphered.

Kurenniemi's archives were donated to the Central Art Archive in Finland in 2006. While almost all of his music recorded at the University studio has been released, and while 100 cassettes of audio diaries are digitized, an enormous number of recordings remain unanalyzed. Boxes of floppy discs and other obsolete media have not been opened, and the maths and formulas which scatter his notes have been largely skipped over for practical reasons. And a big gap remains from a six-year mystery period spent in a Soviet nuclear town, which he is not at liberty to discuss even

with his wife and the location of which was not marked on maps for many years. There is much yet to discover about Kurenniemi to be able to place him in history – some of it surely to be found in the archive boxes marked »to be opened in 2048«. Although he is alive today he has difficulty communicating due to a stroke suffered nine years ago. His humour and obsessions with the feelings of the physical body nonetheless set him apart from his contemporaries, electronic music pioneers, artists, scientists, or transhumanists. Far from being cold and mechanical, or even machine like, Kurenniemi is vibrantly human, with desires and impulses – a far cry from any common visions of a machine-led future. If this is what the future looks like, set the clocks to count down to 2048.

This article is indebted to the essays and research contained in Erkki Kurenniemi: A Man From The Future, Petri Kuljuntausta's First Wave – A Microhistory of Early Finnish Electronic Music, as well as Kurenniemi's online archive, and conversations with Kati Kivinen, Mikko Ojanen, Jari Suominen, Perttu Lastas, and most of all, the work of Mika Taanila. Kurenniemi's archives can be found at kurenniemi.activearchives.org. A retrospective of his output, Towards 2048, is on at Kiasma, Helsinki until March 2014.

IANNIS XENAKIS, THE POLYTOPES AND MUSICS OF OTHERNESS

BY CHRIS SALTER

At CTM 2014, artist and researcher Chris Salter presents an homage to Iannis Xenakis by re-imagining Xenakis's Polytope installations with new techniques. »n-polytope« combines cutting edge lighting, lasers, sound, sensing, and artificial intelligence software technologies to create a spectacular light, sound, and architectural environment. Both the installation and Salter's article attempt to grasp how Xenakis's interest in modeling the behavior and patterns of nature in their fluctuations between order and disorder, can still powerfully resonate with our own historical moment of instability in natural and artificial systems.

One of the most important developments from the perspective of 20th century aesthetics is the notion that order and disorder are not binary opposites but instead, function on a continuum. Moreover, the qualities of order/disorder that infiltrate and explain the workings of natural and artificial systems are not given but contextual, influenced both by a system's internal makeup or its so-called endogenous variables (e.g., temporal and spatial scales), together with qualities that lie outside of the system's operations (its exogenous variables such as the cultural and social context or the physiology of the observer).

That artistic practice in the 20th century, particularly that which was occupied with the means and effects of new technologies, would ground much of its interest in the role of order and disorder seems self evident when we look back in hindsight from our current perspective. As the late and great British Marxist historian Eric Hobsbawm wrote in *The Age of Extremes*, the first forty years of the 20th Century, which he dubbed the age of catastrophe, stumbled »from one calamity to the next.«¹⁾ From the overwhelming brutality of the trenches of World War I and subsequently World War II, the deadliest war in human history which ended in an atomic-fueled nova, artists attempted to grapple with the radical transformations before their eyes with whatever means they had at hand.

The work of the polymath Iannis Xenakis, Greek born, French exiled, trained in civil engineering and music and moving almost seamlessly between architecture, acoustics, philosophy, technology, and aesthetics throughout his life, is exemplary not only of Xenakis's historical moment but of our own, where we are overwhelmed by the profound social-technical-artistic shifts wrought by

new techniques while we edge ever closer towards an ecological precipice, unknown but on the near horizon.

That Xenakis could compose music in which, as the Guardian wrote in an April 2013 article, »you're confronted with an aesthetic that seems unprecedented according to any of the frames of reference that musical works usually relate to«, is deeply rooted in the composer's own direct, lived encounter with the savagery of war's devastation and his resistance to it.²⁾ The almost cosmological imminence of the destruction of World War II infects almost every aspect of Xenakis's artistic worldview, from his own direct bodily experience of losing an eye in a blizzard of shrapnel blasts, to the witnessing of the spectacular ruination of Athens that he later describes in spectacle-like proportions:

»Whether you like it or not, simultaneous visual and auditory events that are both specific and extraordinary, without any apparent connections, enter one's brain when experienced as fighting in the street. For example, speeding bullets of various colours plus their trajectories - all of that was visually striking. They can be compared to the movements of celestial bodies, comets ... falling stars [...] I witnessed bombings - those were extraordinary [...] Not to mention the army's searchlights (since there wasn't radar then), which created a stunning ballet in the sky. Plus the explosions, plus ... All of that created a fantastic spectacle, one that can never be seen in times of peace.«³⁾

These incredible, ferocious images and sounds are those that most of us born in the post-World War II period and, particularly, after the 1960s and the Korean and Vietnam wars, have never experienced. But they find their way into Xenakis's work in a most in-



n_polytope: Behaviors in Light and Sound after Iannis Xenakis, by Chris Salter in collaboration with Sofian Audry, Marije Baalman, Adam Basanta, Elio Bidinost, and Thomas Spier. Photo: Thomas Spier, www.apollovision.de.

delible manner: the dense cacophony of glissandoing strings in his first major work, *Metastaseis*; the searing granulation of crackling, burning charcoal that makes up the only sound source of *Concret PH*, Xenakis's composition for the small entranceway of the Philips Pavilion; the bursting, pointillist mass of stroboscopic lights that constitute the visual *mise en scene* of the multi-media *Polytope de Montréal* and *Cluny* spectacles, and the parades of fire and searchlights of the *Polytope de Persepolis* and *Mycenae*. Even Xenakis's unrealized projects such as plans for an interstellar polytope that would utilize a network of lasers and satellites bouncing beams to and from the earth bear the traces of the composer's early life experience.

As Ben Watson in *The Wire* wrote, Xenakis entered into the post war composition scene with »music of truly majestic otherness.« Coming of artistic age in the 1950s, the composer already rebelled against the musical trends of his time: the stultifying reign of post-war serialism which had seized the musical avant-garde, forcing composition into a rigid, deterministic dogma. »Linear polyphony,« wrote Xenakis in his manifesto-like treatise »The Crisis of Serial Music« in 1954, »destroys itself by its very complexity; what one hears is in reality nothing but a mass of notes in various registers.«⁴⁾

Critiquing the »linear category« in musical thought, Xenakis instead sought a wholly different direction, organizing and creating compositions through his vast knowledge of techniques from the domains of mathematics, physics, and statistical mechanics; formal techniques that at first might seem at odds with sonic landscapes marked by such extraordinary primal intensity. Yet, the micro/mac-

ro movements of particles and gasses, algebraic groups and set theory, or the transformation of individual sounds into mass sonic events by way of probability distributions all provided Xenakis with the tools necessary to transcend the static determinism that he saw paralyzing his colleagues.

Similarly, Xenakis's passionate interest in projective geometry and questions of the morphology of form led to seminal contributions in the other field that he mastered: architecture. Starting with the legendary Philips Pavilion collaboration with Le Corbusier in the mid-1950s, and continuing with his work in Le Corbusier's studio until 1959, Xenakis never let go of his concerns for the synthesis of musical and architectural space. In his thought, built forms could become transformable, not only through the construction of non-standard geometries such as ruled surfaces and hyperbolic paraboloids, but also by knowing how sound itself would interact with such surfaces and structures. »Such ways of moulding surfaces,« he described in an undated article called »Topoi« (presumably from 1970) »open the path for rather rich possibilities in terms of modulating an acoustic space.«⁵⁾

That there is not only a continuum between order and disorder but also between the natural and artificial in Xenakis's work is immediately evident. The most complex mathematical models underlie the composer's attempts in music and larger-scale cross media environments like the Polytopes, to generate a human experience of the cosmos. The bursting of novas, the spontaneous formation of constellations, the flow of rivers, or the movement of the wind all constitute phenomena that Xenakis sought to harness for artistic purposes. In many ways, this approach was exemplary of one

of his many philosophical heroes – the pre-Socratic Heraclitus of Ephesus, who argued that the nature of the world was indeed flux itself: »everything flows and nothing abides; everything gives way and nothing stays fixed.«⁶⁾

The Polytopes, a partial neologism from Xenakis that signifies »many spaces« but is, in fact, the description of a geometric object with flat sides that exists in any number of dimensions, were a response to his work with Le Corbusier on the Philips pavilion – particularly the master architect's design of the projected images in the pavilion, which Xenakis later critiqued in his 1958 text »Notes Towards an Electronic Gesture.« Le Corbusier's use of the cinematic image could not go beyond the rectilinear frame; »the screen hole or projection window« which stranded the image within a flat, 2-D horizontally and vertically defined space. Instead, Xenakis suggests the transformation of image in relationship to sound through new kinds of geometric spaces that could warp, shift, and mutate the image into »a new architectural concept that will emerge from the beaten path of the plane and right angle in order to create a space that is truly three dimensional.«⁷⁾

Given the opportunity to create a musical work for the French Pavilion at the Montréal World Exposition in 1967, Xenakis proposed to curator Robert Bordaz and the pavilion's architect Jean Faugeron the first Polytope – »an electronic sculpture combining light, music, and structures« – a massive architectural installation consisting of 200 steel cables spanned in a hyperbolic paraboloid structure through the pavilion's central atrium and outfitted with some 1200 mechanical relay-controlled white and colored xenon stroboscopic lights. The »Polytope de Montréal« was only the first of six other Polytopes, followed by installations in Persepolis (Iran), Paris (1972), Mycenae (1978), and Paris and Bonn (the Diatope, in 1978), plus two unrealized attempts planned for Mexico and Athens.

Despite their published scores and documentation, the Polytopes were never meant as fixed and final works but rather as site-specific environments, each uniquely tied to its particular socio-cultural-architectural context. The »Polytope de Montréal«, for example, was in many ways radically antithetical to Expo 67's other pavilions, where the predominant theme was the transformation of the moving image through new forms of screen technology. From the still today radical work of the 20th century genius scenographer Josef Svoboda, who was responsible for the complex multi-screen installations »Polyvision« and the »Diapolykran« at the Czech pavilion, to developments by Canadian experimental filmmakers like Francis Thompson or Roman Kroiter and Graeme Ferguson, who demoted the first seeds of what would become IMAX, the screen as technology and icon of progress took over the perceptual landscape of media in the exposition.

In contrast, Xenakis's six minute, continually cycling light and sound »Gesamtkunstwerk«, with its 1200 strobes and four channel orchestral score all driven by a completely Byzantine control system of light sensors and a perforated command film punched with every possible lighting configuration, operated in direct contrast to Expo '67's representational spectacle of the image. Indeed, even now as we face the ability to create high-resolution LED images, turning urban buildings and spaces into gigantic electronic billboards, Xenakis never seemed particularly interested in using thousands of points of light to create images, but rather to generate temporal forms and shapes that would invoke »two different musics: one to be seen and the other to be heard.«

While Xenakis's notes detail a compositional sequence in the »Polytope de Montréal« of »stochastically distributed rivers«, »deep

blue beacons«, »black holes«, and »whisps of fire«, all generated by the lighting in a continuously developing set of intensities of varying densities and rhythms, the Polytopes were meant to spawn the new kinds of electronic gestures that Xenakis already saw on the horizon. If light would be used as a temporal phenomenon, creating a »multitude of points that stop and go«, sound, created by acoustic instruments, would generate a space, a »continuity, thanks to the multiple glissandi – »sound that changes but never stops.«⁸⁾

In this way, as we look back at the Polytopes, these fascinating and relatively forgotten works of »new media« seem much closer to the kind of synesthetic experience described by psychologist Daniel Stern, which greets infants in the early stages of life who cannot understand human language but still seem to gravitate towards patterns, shapes, and sensations that, while not identifiable, nevertheless generate strong emotional responses and affects.

Although for »n-polytope« we based our research on the Montréal and almost hallucinogenic »Polytope de Cluny« which took place in the Cluny vaults in Paris in 1972, the work that we originally developed for the LABoral Center for Art and Industry in Gijón, Spain in the summer of 2012, and that is now being revised and re-worked here in Berlin for CTM 2014, is by no means either a reconstruction or re-enactment. Even with archival access and many discussions with Xenakis' former assistant and translator Sharon Kanach and Cluny programmer Robert Dupuy in Montréal, it would be presumptuous and foolish to imagine that one could get into Xenakis's head or to make an artistic experience like he could – to live not only through his deep understanding of mathematical form and how to translate this into aesthetic dimensions, but also to immerse oneself in the profound experiences that Xenakis had of a world on the verge of simultaneous annihilation and unfathomable scientific and aesthetic development.

Instead, as already stated in the article »N_Polytope«, for the 2013 volume *Xenakis Matters*, on the posthumous impact of Xenakis' work, we approached our project in the spirit of reimagining. What would the Polytopes be like today? What techniques might Xenakis be drawn to if he were working now? How could we explore how Xenakis's interest in indeterminate and stochastic systems could be made »experienced and lived within our own historical moment of extreme systemic instability?«⁹⁾

As we confront a world which at many times seems almost completely out of control – where the lines between the born and the made, the natural and artificial, the ordered and the disordered seem to be further blurred everyday – Xenakis's approach to »the fluid, rational and intuitive aesthetic of the imagination which seems to flow between light, sound and technology and theories« seems as radical in 2013 as it was in 1967.

In *Arts/Sciences: Alloys*, a published account of his Doctorat d'Etat defense in 1976, Xenakis called for a new kind of musician/artist – an »artist-conceptor« of new abstract and free forms tending towards complexities and then towards generalizations on several levels of sound organization.¹⁰⁾ Such an artist would not only be aware of the scientific and aesthetic trends of their time [»mathematics, logic, physics, chemistry, biology, genetics, paleontology (for the evolution of forms), the human sciences, and history«] but also would be governed by a triad of functions that Xenakis saw as essential to creating artistic experiences: inference (exploration of forms), experiment (challenging theory through action), and revelation (the exposure of and to the ineffable).¹¹⁾ It is our hope that this attempt at reimagining Xenakis's almost cosmological vision does justice to the composer's aim: to create the conditions for artistic experiences to reveal and transform the world.

Stanford University graduate [Chris Salter](#) is currently Director of the Hexagram Concordia Centre for Research and Creation in Media Art and Technology, and Associate Professor in the Department of Design and Computation Art at Concordia University, Montréal. His artistic works have toured internationally, been written about in *The New York Times*, *The Wire*, and *Leonardo*, among others, and he has received major grants from SSHRC, FROSC, Canada and Quebec Arts Councils, Hexagram, the Rockefeller Foundation, the Daniel Langlois Foundation, and more. In addition to his artistic work, Salter is also the author of *Entangled* (2010, MIT Press) and the forthcoming *Alien Agency* (2014, MIT Press).

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- *2) Tom Service. 2013. »A Guide to Iannis Xenakis's Music.« *The Guardian*. April 2013.
- *3) Sharon Kanach. 2010. »Xenakis' Polytopes.« In *Iannis Xenakis: Music and Architecture*. New York: Pendragon Press.
- *4) Iannis Xenakis. 1956. »The Crisis of Serial Music.« *Gravesaner Blätter* 6, July, 2-4.
- *5) Iannis Xenakis. 1970[2010]. »Topoi.« In *Xenakis: Music and Architecture*. Ed Sharon Kanach. New York: Pendragon, 142-147.
- *6) Heraclitus. »Fragments.« In *The Presocratics*. 1966. Ed. P.Wheelwright. New York: Macmillan.
- *7) Iannis Xenakis. 1954. »Notes towards an Electronic Gesture.« In *Xenakis: Music and Architecture*. Ed Sharon Kanach. New York: Pendragon, 131-134.
- *8) Xenakis. 1967. »The Polytope de Montréal: An Approximate Scenario of Light and Visual Art with the French Pavilion.« In *Xenakis: Music and Architecture*. Ed Sharon Kanach. New York: Pendragon, 210-211.
- *9) See C. Salter. 2013. »N_Polytope: Behaviors in Light and Sound after Iannis Xenakis.« 2013. *Xenakis Matters*. Ed. Sharon Kanach. New York: Pendragon.
- *10) Iannis Xenakis. 2011. *Arts/Sciences: Alloys*. Ed and Trans. Sharon Kanach. New York: Pendragon.
- *11) *Ibid.*, 3-4.



Iannis Xenakis, »Polytope de Montréal.« Photo from Iannis Xenakis, *Music and Architecture*. Ed. Sharon Kanach. New York: Pendragon, 2008.

IMAGE & SOUND

EXPERIMENTAL ART TEACHING IN THE INTERSTICES BETWEEN VISUAL ART AND MUSIC

BY MICHAEL VAN HOOGENHUYZE

The history of art in the last two centuries is not a clear stream of artists influencing the next generation with their work. It is rather like a labyrinth with signals, lost opportunities, and rediscovered possibilities. The start of the Interfaculty for Image and Sound of The Royal Academy of Art and The Royal Conservatory in The Hague is a good example of this complicated situation.

The 20th century was marked by the growing importance of technology, which developed into the current period of new media, digital arts, and electronics, which is increasingly characterized by the blurring of boundaries between art and real life due to the strategies of »readymade« and »performance« in the work of artists like Marcel Duchamp.

These developments were fomented in art movements such as Futurism (±1909-14) and Dada (1917), and in art schools like the Bauhaus (1919-33), movements whose experimentation heavily inspired art and art practitioners during the 1950s. When the composer John Cage began to conduct interdisciplinary experiments in North Carolina's Black Mountain College, he was aware of the importance of Marcel Duchamp's work.

In 1958 the Philips company presented a complex work of art during the World Fair in Brussels. The famous Philips Pavilion was designed by LeCorbusier and his assistant Xenakis. »Le poème électronique« by Edgar Varèse was diffused inside the structure. During that period the composer Dick Raaijmakers (1930-2013) worked at the Philips laboratory in Eindhoven. He made the first electronic music in the Netherlands, and also what can be considered the first electronic pop music in the world. Varèse finished his composition for the pavilion in Brussels in the same laboratory. In that way Raaijmakers was a witness of the endeavour to make a new *Gesamtkunstwerk* using advanced technologies.

In 1988 John Cage visited the Royal Conservatory in The Hague as a guest teacher. The psychologist Frans Evers, an expert in the field of synaesthetics, used this opportunity to organize interdisciplinary art projects based on Cage's experiments at Black Mountain College, called »happenings«. Evers cooperated on the project with Dick Raaijmakers, who was also working at the Royal Conservatory at that time, thus beginning an intensive cooperation between the two.

At this time the Royal Academy and the Royal Conservatory in The Hague merged. Evers and Raaijmakers initiated a special experimental art department for the field between visual art and music, named The Interfaculty for Image and Sound. Through their meeting with Cage and with Raaijmakers's experience, Frans Evers succeeded in bringing together two important moments in 20th centu-

ry art: The heritage of the disappearing boundary between art and daily life in the Dadaistic revolution (Marcel Duchamp / Cage), and the interdisciplinary use of new electronic means as a triumph of technology, developed by industry (the Philips laboratory, the Brussels Pavilion). The department for Sonology, dedicated to experimental composition, was founded in parallel through acquisition of the technical equipment that belonged to the Royal Conservatory.

In 1994, the two new departments, Interfaculty for Image and Sound and the department for Sonology, started to organize the Sonic Acts Festival in Amsterdam's Paradiso concert hall. As of 2005, students, teachers, and alumni of Image and Sound also made contributions to the Today'sArt festival in The Hague.

Professors and students from the Interfaculty also organized some notable interdisciplinary art projects. In »Die Glückliche Hand« an opera by Arnold Schönberg, professors and students went back to the beginning of the avant-garde movement, analyzing the opera and making a new project that fused Schönberg's ideas with new media and technical possibilities to create a completely new performance / electronic opera. The opera was performed several times in the Royal Conservatory in 1993.

That same year, Dick Raaijmakers, Horst Rickels, and Walter Maioli worked together on »Fort Klank«, a project that took place in an old fort in Asperen, Netherlands. The trio designed several sound installations in the fort, which were tuned together into one big composition; the fort, an old 19th century construction, became an experimental instrument, working as a large clock or robot.

To mark his retirement from the ArtScience Interfaculty in 1995, Raaijmakers organized a concert entitled »Scheuer im Haag«, an opera which he created as a combination of different art forms and technical devices such as to produce a completely new work of art. He continued to be active in creation and performances long past his retirement, however.

These three projects number only a few belonging to a large body of work. Most of them contain a combination of research on the history of avant-garde, and the development of completely new artforms. As many of the students who worked on these projects came from abroad, ideas developed at Image and Sound spread easily around the globe. In 2004 the Interfaculty took a new name, ArtScience, to refer to the growing influence of Science and Humanities in the department, resulting from cooperation with the University of Leiden.



Preparation of »Mondriaan's Promenoire« at the Interfaculty Image and Sound in 1994.
From Left to Right: Dick Raaijmakers, Jan Zoet, Robin Deirkauf.
Photo: Remco Schuurbijs.

Michael van Hoogenhuyze describes (dis)connections between past and present currents of artistic experimentation, and a series of events and chance meetings among protagonists active in different localities, which laid the foundations for the seminal Interfaculty for Image and Sound in The Hague. Following van Hoogenhuyze's contribution is a text by the Interfaculty's previous director Frans Evers. Taken from *Dick Raaijmakers: A Monograph*, it describes a meeting between John Cage and Raaijmakers, which catalyzed the creation of the Interfaculty. Known today as the ArtScience Interfaculty, the school continues to inspire young generations of avant-garde intermedia experimentalists worldwide, while remaining motivated by the pioneering educational and research approaches of its founders Raaijmakers and Evers, their contemporaries, and the historic adventurers that inspired them.

MUSIC FOR THE FIVE SENSES*¹⁾ BY FRANS EVERS

Mushrooms

As the press walked in and out, Frans de Ruiter came up and introduced us to the US embassy's cultural attaché. The ambassador wanted to give a reception for Cage, and the attaché asked us if we would handle it. We immediately began to make plans. Dick Raaijmakers suggested we seize the opportunity by doing something involving mushrooms. He had seen so many on his walk in the dunes that he proposed a Saturday morning mushroom hunt with Franco Ferro, a restaurateur friend who, like Cage, was a mycologist.

When Raaijmakers and Ferro returned to the conservatory a few hours later with ten boxes full of mushrooms, Cage seemed to smell them right away. In a split second, he was at the front door, busy-ing himself with the mushrooms. He selected the edible ones on the way to the kitchen, and as soon as a special oil he requested arrived, he fried them to the desired tenderness. At the same moment, the stage in the Kees van Baaren auditorium was being prepared for the reception.

The US flag was planted at one corner of the theater's stage; an immaculate white table of drinks and glasses was placed at the other. Stars were projected on the walls and ceiling. And on a table dozens of meters long at the front of the stage, black lacquer dishes of sushi and other Japanese snacks were placed around the hundreds of mushrooms that made up the centerpiece. No one expected the tension that had been building for days to come to a head during the reception.

The ambassador complained about the meager scope of cultural exchange between the United States and the Netherlands, even if this was because the US government spent too little money on it. At once irritated and amused, John Cage couldn't resist responding with an exceptionally provocative question: »Why don't you give up the United States?« He then took the bowl of mushrooms and, using chopsticks, fed a bite to everyone who came to greet him. The gesture seemed to be an attempt to express that it was OK for the evening to take a more sociable turn. Either way, the mushrooms eventually began to work, and everyone was soon walking around cheerful and high-spirited.

A few days after the reception, nature cropped up as a theme in yet another form when the Italian ethnomusicologist Walter Maioli arrived to make his contribution to »Book III«. Maioli said he would like to give a lecture for Cage on his collection of primitive musical instruments: stones, bones and shells fashioned into bullroarers, flutes and rasps like those used to produce sound in prehistoric times. Cage attended this unscheduled event and showed great interest in Maioli's presentation, which reminded him of the natural and found instruments he had gathered himself in the 1930s for the performances of »Quartet« (1935).

Music for the Five Senses

As closing night approached, it emerged that the sixty participants in »Book III« would ultimately be responsible for a total of seventeen projects, presented simultaneously. The closing event, »Music for the Five Senses«, would involve a number of units, including a sonologists' trio that would play a DJ set using three turntables. A composition student would present an automated performance of Cage's »Imaginary Landscape No. 4« for twelve radios, based on an installation he had made for the CAM course Electronic Imagery. An actor would read a Slauerhoff poem while two Australian actresses performed a number of archetypal theatrical scenes. Two students from the Enschede arts academy would show a video still of the conservatory's roof on a monitor, positioning themselves on either side as watchmen with a bottle of vodka, Cage's favorite drink. A student from The Hague's Royal Academy of Arts would hack away at a sculpture during the event. A composition student would experiment with a piece made of forest air. Filmmaker and CAM instructor Babeth VanLoo would project a film about »eat art«. The NN collective's interactive tom-tom would be reprogrammed for the occasion. The »Sound Walk« video would be projected on one wall of the Schoenberg auditorium. And for the finale, a group of Amsterdam dancers would paint a number of transparent plastic panels during their monumental dance performance.

As the »Book III« participants put the finishing touches on preparations for their contributions to the total composition, they still had no idea how it would look. This changed when Dick Raaijmakers began searching for a structure for the closing event. His collection of literature on subjects relating to recreational mathematics included an 1849 article from the chess magazine Schachzeitung. In it, Carl Wenzelides described a new variation on the magic knight's tour, a sequence of moves composed a year earlier by William Beverley.

The exceptional thing about this and other knight's tours is not only that the knight lands on every square on the chessboard exactly once, but also that the sequence, of which many more variants have since been published, can take on lovely symmetrical patterns. Raaijmakers suggested plotting the sequence on the floor of the foyer and the Schoenberg auditorium as if the two together formed the surface of a chessboard divided into sixty-four squares. The groups were considered as units, and each was assigned a field, a timetable indicating when it would be active, and a stopwatch for telling time. Every project was allotted a place in the whole, using the knight's sequence, and a statistically determined division of time determined which unit would be heard when. Raaijmakers would operate the mixing board, keeping the Sound Walk audio in balance with that of the other units. At sound check, Raaijmakers' instruction to play as quietly as possible proved very difficult to follow. So instead, he asked all the units to slow down their playing by forty-eight times.

Preparation of »Mondriaan's Promenoire« at Interfaculty for Image and Sound.
From Left to Right: unknown, unknown, Horst Rietels, Frans Evers, Dick Raaijmakers, Robin Derkaut, Photo: Remco Schuurbers.



The result was that all the performers played for nearly the entire hour and a half that the »Music for the Five Senses« event lasted. The effect of slowing down everyone's actions was, as Raaijmakers had desired, a total sound that was not too loud and, now and then, even a moment of near-complete silence. Seated at the mixing board on the large stage, he adjusted the »Sound Walk« mix to the soundscape produced by the individual units, so that the various performances' individual characteristics slid over and past each other in succession through the course of the evening - as if a knight was moving in slow motion through the foyer and auditorium.

Dim lighting the conservatory's theater technicians had taken the initiative of installing in the foyer created an especially exotic atmosphere in a room that normally made a fairly boring impression. Since the audience members had no idea of the structure of the whole, and the performances seemed to be moving randomly through the foyer and the auditorium, they got up of their own accord to watch the various units from close by.

Nearly everyone had expected »Book III: The New Media« to be something of a cold affair, full of the use of technology for its own sake. But if »Book III« demonstrated one thing, it was that so-called cold equipment could be used in extremely accessible ways. »Book III: The New Media«, and in particular »Music for the Five Senses«, unintentionally exuded an atmosphere that called to mind the famous »Untitled Event« (later renamed »Theater Piece No. 1«) realized in 1952 at Black Mountain College by instructors including John Cage and Merce Cunningham and students including Robert Rauschenberg. One of the first open-form pieces in which old and new media were used together, it became famous as a happening avant la lettre. With »Book III«, Dick Raaijmakers had succeeded in recreating the essence of the phenomenon of the happening - once again in the context of art education, just as in 1952.

What was that essence? Based on his philosophy of freedom within limits, John Cage had asked every participant to come up with an

action that could be performed at moments determined by chance operations and noted in the form of »time brackets« with beginning and ending times. Places were then determined by arranging the seats in a Maltese cross formation, creating space for movement between and around the audience members, who would sit facing each other. Cage timed the concerted actions with utmost precision, but this did not prevent uncontrolled life from entering »Untitled Event«: babies screamed through everything, and a dog followed Cunningham and the student dancers, barking, each time they began to move.

The choreographer Merce Cunningham had formed a student dance group; they roamed the aisles at set times, moving between and around the audience in simple patterns. On a prepared piano, David Tudor played »Water Music«, a composition Cage had written earlier that year, alternating with a composition for radio. Standing at a lectern, Cage read fragments of his Julliard lecture. M.C. Richards and Charles Olson recited poetry standing on a ladder in the middle of the audience. Students scratched records by artists including Edith Piaf at double speed on a wind-up gramophone and projected slides made with colored gelatin and films of the school's cook onto Robert Rauschenberg's »White Paintings«, which hung against the ceiling at an angle. Then they projected a setting sun, which slowly detached itself from the panels and disappeared via the walls into the floor of the Black Mountain College cafeteria.

Other than the obvious differences, like the fact that the »Untitled Event« at Black Mountain College was created in one afternoon while preparations for »Music for the Five Senses« took two weeks, both happenings were the result of their composers' decision to establish only the place and duration of the actions, leaving their form to the participants. Such compositions are thus referred to, not inaccurately, as having an »open form«, although one person determines the rules. Since the twentieth century, metacomposers have felt free to include all forms of art and new media in their compositions.

The Interfaculty

In art education in general, remarkably enough, we have scarcely begun to impart knowledge or construct experimental labs for students wishing to do research in the area of sound, light and kinetics in order to develop new forms of visualization and sonification. In our conversations, Dick Raaijmakers and I often spoke about the virtual absence of educational innovation in almost all the established art institutes. Partly to hearten us, Raaijmakers brought up the innovative educational concepts of Arnold Schoenberg and László Moholy-Nagy, who had drafted outlines for a School for Soundmen and an Institute of Light in 1941-43. It was these examples - together, of course, with the now-famous history of the Royal Conservatoire's electronic studio - that sustained us in our efforts to launch a new, boundary-crossing institute that would have room for such an innovative approach.

When the Image and Sound Interfaculty opened in 1989, at the founding of the Academy of Fine Arts and Design, Music and Dance, it constituted a starting shot for a series of projects examining the modernist founders' proposed uses of new techniques in Gesamtkunstwerk-style works in terms of their value within the new art education. After Raaijmakers set up the exhibition »Anti Qua Musica« at the Gemeentemuseum in The Hague while a guest curator in the music department, the museum's director, Hans Locher, invited us both to develop a new activity that would benefit art-school students and Leiden University art-history students. This invitation led on the one hand to the »auditorium lectures,« whose core was the course »The Language of Image and Sound«, which I gave together with Raaijmakers, Hans Locher and Doro Franck (1989-2003), and on the other to the Plastic Sound Laboratory, where artists presented work related to the subjects discussed in the lectures and classes.

Yet it was the »learning-by-doing« projects, in which historic multimedia concepts were examined in a contemporary light and re-composed using modern media, that played the most essential part in the Image and Sound Interfaculty's new teaching. The series of »collective projects«, as the instructional pieces were now called, began with a score of Arnold Schoenberg's *Drama with Music* »Die glückliche Hand« (1910-13) that had been »opened« under Dick Raaijmakers' enthusiastic leadership. In specialized working groups, instructors and students examined its individual components, looking for ways to redesign them using contemporary techniques and insights. »Die glückliche Hand geöffnet« was the climax of the Schoenberg-Kandinsky Symposium, held in 1993 in collaboration with the Gemeentemuseum on the occasion of the opening of the Royal Conservatoire's new studio complex for sonology, music recording, and image and sound. The three departments later worked together on two large joint projects: the previously mentioned »Promenoir van Mondriaan« (1994) and »Scheuer im Haag« (1995), the work which, on his retirement, served as Dick Raaijmakers' farewell to the Royal Conservatoire.

Frans Evers (1948-2010) studied developmental and experimental psychology at the University of Amsterdam. Upon completion of his studies in 1979, he initiated the research project Experimental Synaesthesia, which was concerned with the influence of sound on visual perception. In 1980 he began lecturing at the Conservatory of Amsterdam. In 1984 he received a Fulbright Grant enabling him to continue his research in the US, first as a visiting fellow and later, during his studies on reaction times in interacting cross-modal dimensions, as a research fellow with Professor Lawrence E. Marks at the John B. Pierce Laboratory at Yale University.

In 1986 Evers continued his work as a researcher and educator at the Sonology Department of the Royal Conservatory, where he initiated innovative courses on art and new media, first in the Center for Audiovisual Media (CAM) which he founded with Dick Raaijmakers, later within the Aula Lecture series which he organized with curator Hans Locher in the Haags Gemeentemuseum, and finally by initiating the Interfaculty Image and Sound, a partnership of the Royal Conservatory and the Royal Academy of Art, in 1989. In 1994 Evers sparked a structural collaboration with club Paradiso in Amsterdam, in the form of the yearly Sonic Acts Festival. In 2001 he was invited to contribute to the founding of Leiden University's new Faculty of Creative and Performing Arts. In 2012, the Ever's book *The Academy of the Senses, Synaesthetics in Science, Art, and Education* was published via the ArtScience Interfaculty Press, The Hague.

Dick Raaijmakers (1930-2013) was born in Maastricht, and studied piano at the Royal Conservatory in The Hague. From 1954 to 1960 he worked in electroacoustic research at Royal Philips Electronics Ltd. in Eindhoven. There, using the alias Kid Baltan, he and Tom Dissevelt produced works of popular music by electronic means (which turned out to be the first attempts of their kind in the world), under the name Electrosoniks. From 1960 to 1962 Raaijmakers worked at the University of Utrecht as a scientific staff member, and from 1963 to 1966 he worked in his own studio for electronic music in the Hague, together with Jan Boerman. Then, from 1966 until his retirement in 1995, he worked as a teacher of Electronic and Contemporary Music at the Royal Conservatory in The Hague, and since 1991 also as a teacher of Music Theatre at the Interfaculty for Image and Sound at the same school. Raaijmakers passed away on the third of September, 2013.

Michael van Hoogenhuize is professor for art history and art theory at the ArtScience Interfaculty at the Royal Academy of Fine Arts in The Hague. Working as an historian and art teacher, van Hoogenhuize has contributed to several publications, including V2_'s 2008 publication, *Dick Raaijmakers: A Monograph*.

*1) This text is an excerpt of the text »Dick Raaijmakers Meets John Cage« by Frans Evers, taken from Arjen Mulder and Joke Brouwer (eds.) *Dick Raaijmakers - A Monograph*. Rotterdam: V2_ Publishing, 2008, with kind permission.

WORLDS OF THE DRONE

BY MARCUS BOON



Design sketch for a Shruthi box by Mutable Instruments, and a traditional Shruthi box from the company Amrita.

Probably no other musical phenomenon embodies the idea of continuity as does the drone. A set of sustained tones or continuous clusters of sound that feature slight yet complex harmonic variations, drones are literally eternal - they have no beginning and no end, and have been integral to human music making since our beginnings. As such, the drone shrinks the vast timespan between the archaic past and our computational present, and often evokes ideas of spirituality.

In his overview of drone, Marcus Boon explores the ontology of drone and the powers of its inassimilable sameness. Boon's article is followed by an examination of two pioneering artists, working with drones: Eliane Radigue and Ernstalbrecht Stiebler. Both worked extensively with silence and duration, exploring the idea of evolving sounds from within sounds, and inviting the listener to partake in intense exercises in hearing.

A recent packaged-for-Walmart double CD compilation called *Roots of Drone* confirmed what I already suspected: that in the last decade or two, drone has become a musical genre, complete with labels like Kranky, Tri Angle, or Important, who all focus on the many iterations of drone. This may seem odd since after all, a drone is basically a tone, or set of tones that are sustained over time. For a lot of people, a drone wouldn't even be called music, just an irritating noise, like the buzzing of a refrigerator, the hum of traffic, the sound of bees in a hive. For others, it is OMMMM, the sound of the universe in Hindu cosmology, or, put in the language of modern physics, an expression of the fact that everything vibrates, everything is a wave. In a consumer marketplace driven by a craving for endless but often trivial kinds of novelty, making the same sound for a long time is a powerful gesture of refusal. Even so, there's now drone rock, drone metal, drone-based techno, drone within the classical tradition, drone-folk, not to mention a variety of apps like SrutiBox and Droneo that can generate drones on your mobile phone or iPad. And today the varieties of drone are also a part of the drone of the global marketplace.

A drone is simply a sustained set of tones. While drones can be located in the history of music everywhere from the tambura led sound of Indian classical music to the prelude to Wagner's »Das Rheingold«, drones became important cultural artefacts in their own right in the early 1960s. Whether La Monte Young really created the first drone-based musics, he and the circle of people around him articulated a new way of thinking about them. Young contrasted his work to that of John Cage, which can be said to be truly phenomenological, in the sense that it is concerned with the way that sound appears to a particular subject in space and time. In contrast to the »silence« of »4'33"«, Young's drones fill space and time. They are intensely repetitive, they emphasize a quality of sameness which bifurcates into an experience of difference that is the repetition of the same; in Young's formula »tuning is a function of time« ... meaning that as one tunes into particular groups of frequencies within a particular drone sound, further levels of frequency become audible ... as well as a sameness that in some sense is »always there« whether the drone is being played or not. In this sense one could argue that drones represent a structural response to the Cagean phenomenology of sound. This is particularly true when the production of drones is formulated from within a mathematical paradigm of just intonation; in other words, that only frequencies that obey certain rules that are in accordance with the natural harmonics of sound are used for the composition of drones. A drone is a mathematical structure enacted within a particular space by a particular sound-making apparatus, whether musicians or machines.

This picture becomes further complicated by French musicologist Alain Danielou's work on tuning systems in traditional cultures, which Young and Tony Conrad read in the early 1960s. The upshot of this work is, first of all, that just intonation scales (i.e. scales that can be described using ratios of whole numbers) form the basis of many traditional musics. Furthermore, particular permutations of particular just intonation scales are associated with particular kinds of affect. Thus Hindustani raga music associates each raga, which is a combination of a particular scale, with a particular set of rules for movement around the scale, with a particular mood or feeling. A great raga performance evokes this feeling, which Pandit Pran Nath, mentor of Young, Catherine Christer Hennix, Charlemagne Palestine, and other minimalists, described as a »living spirit« that possesses those who listen to it. This adds important dimensions to the structural nature of just intonation-based musics, since it effectively makes the argument that particular kinds of affect or feeling

can be described as particular sound forms that can be mathematically described. In other words, there is a mathematical structure to feeling. In performance, a raga pulls you into its sound world ... it evokes a yearning which could be described as the feeling that the sound and mood elicited by the raga are more real than the apparently real world that exists outside of the performance.

But this then raises further questions, which in fact Young, Conrad, and others including Hennix who worked with drones did ask, and which formed the basis of their work. If traditional musics can be defined in terms of a mathematics of affect, and the basis of those mathematics is the extrapolation of musical scales based on ratios of whole numbers, to what degree does that offer not only a description of traditional musics, but the possibility of an experimental music, based on hitherto unheard-of scales and pitch combinations? Composers such as Hennix, Radigue, and Palestine have explored many of the possibilities of such a music, often by connecting religious traditions, whether Tibetan Buddhism for Radigue, or medieval Christian church organs for Palestine, with modernist techniques of improvisation. The drone, like drugs or eroticism, cannot be easily assimilated to one side of the divide by which modernism or the avant-garde has tried to separate itself from the world of tradition. Like the psychedelics, the drone, rising out of the very heart of the modern and its world of machines, mathematics, chemistry and so on, beckons us neither forward nor backward, but sideways, into an open field of activity that is always in dialogue with »archaic« or traditional cultures. This is an open field of shared goals and a multiplicity of experimental techniques, rather than the assumed superiority of the musicologist or the naïve poaching of the sampler posse.

There is no necessary connection between just intonation tuning systems and drone music, however. Phill Niblock has been composing and performing drones for decades. Although he is deeply interested in overtones, especially the increasingly rich and complex sets that are produced when pitch combinations are played at high volumes, he has no grand tuning theory and prefers a kind of free experimentation with pitch combinations and permutations. *The Movement of People Working* is his masterpiece: a collection of films of ordinary people around the world that are performing mostly physical tasks, juxtaposed with Niblock's drones. Often multiple films are shown at once while Niblock improvises particular tone clusters. The tension between the repetitive, meditative everyday movements of bodies, often seen close-up, and the surging, ocean-deep sound is enigmatic, going against the often Orientalist spirituality associated with drones, yet still evoking a profound sense of mystery concerning what work, time, the body are. Niblock's work is a reminder of the synaesthetic quality of drones, the history of their integration into multimedia projects in which sound merges with or clashes against visual or tactile forms.

Drones probably entered the world of popular music through John Cale, who played in the Theater of Eternal Music with Young in the 1960s, and famously brought his cello drone to the Velvet Underground and rock songs like »Heroin«. Certain versions of the Blues, notably the North Mississippi style associated with Mississippi Fred McDowell and more recently Fat Possum Records, involve rapid repetitions of single chords or notes that effectively form a drone. From the Velvets through krautrock favorites such as Can, to shoegazers like My Bloody Valentine, or Japanese masters like Keiji Haino, drones have been an important part of rock. Probably the heaviest rock drone can be found on Earth's classic *Earth II*. The thirty-minute »Like Gold and Faceted« is pure, surging, barely contained but almost static electric power, the ur-drone

or doom metal sound par excellence. Earth gave birth to monstrous progeny like Sunn O))) and Om and more recently to a whole diaspora of dronescaped rock from Robert Lowe's ecstatic Lichens to The Haxan Cloak.

A trace of drone also runs through disco and its various permutations, beginning with the synthesized hums of Donna Summer's »I Feel Love«, the »chicken-scratch« single chord guitar runs of James Brown's guitarist Jimmy Nolen, and Kraftwerk's minimalist synth excursions, feeding into electro, house, techno, and other styles. The latest intensifications of the drone-disco continuum are coming from musicians associated with labels like Los Angeles' 100% Silk (and its elder sister label Not Not Fun) and some of the protégés of Brooklyn-based ambient noise drone master Oneohtrix Point Never, notably the amazing Laurel Halo. This music, which harkens back to Moroder and Sylvester producer Patrick Cowley, is sensual, the drone here is the drone of sexual energy, mental energy, building up to peaks, falling back, and building again. Or, like a lot of drone music, it is facilitated, both for performer and listener, by the use of various psychoactive substances that facilitate states of sustained attention and/or pleasure while moving. Which is a whole topic unto itself. From Tom Wolfe's use of the repeated colon, i.e. :::::::::::::::::::: to indicate the tripping mind in *The Electric Kool-Aid Acid Test*, to Coil's marvelous 1998 side project Time Machines, in which dark, glowing drones are given the names of a variety of psychoactive substances, drones have been used to indicate the hum of psychedelic-revealed Being. One could also track a productive gray zone between noise and drone running throughout the history of industrial music, from Throbbing Gristle and Coil to the bass heavy 1990s techno sounds of Pan Sonic and Basic Channel (whose Mika Vainio and Porter Ricks will be performing at CTM), on to today's generation of experimental techno artists such as Samuel Kerridge, Holly Herndon, and Russell Haswell, the industrial death noise of Pharmakon, or the queer hauntological sounds of Cyclobe.

It's intriguing to see that musicians such as Heatsick are drawing connections between the various traditions of drone music and speculative philosophers such as Timothy Morton. If speculative philosophy's origins can be found in the limits of the linguistic or discursive turn, sound and music obviously arise as matters that are poorly rendered in and as language. Furthermore, in the shift from musicology to sound studies, and from the musical to the sonic, one quickly reaches the limit of correlationism: a world of sounds, frequencies, vibrations that are there, but not necessarily there for us. Having said that, and being wary of claims of being able to leave the correlationist circle, I wonder whether the charm and power of music doesn't already and in general consist in the fact that it is simultaneously inside and outside the correlationist circle. And in answering the question of what is the specific power of music, to say that music opens us up onto a vibrational exteriority, a »great outdoors«, an excess or non-knowledge. Indeed, Bataille's term is useful: non-knowledge is that aspect of the world that cannot be correlated with our knowledge of the world but which nonetheless is decisive for us. Non-knowledge can be the object of a practice that plays with, resonates with that object without knowing it. Music in this sense, accesses, or allows us to access the great outdoors. The drone of the great outdoors could be terrifying, the sound of doom, or ecstatic, as presented in more ambient, minimal or New Age sonic ventures. Analogies with the inhuman, the alien, the Other abound, as do that of a monstrous imperturbable sameness, always there, always inassimilable. Or is that just the unending drone of global capitalism?

How does music connect to the great outdoors? Perhaps here one should speak of Badiou's hypothesis of a mathematical ontology, and then, noting the relationship of mathematics and music stretching back to Pythagoras and beyond, to observe the connections between a mathematical ontology, a vibrational ontology, and a sonic or even musical ontology. This is in fact the claim that La Monte Young made for his own music, which he called »meta music« in the 1960s – a claim grounded simultaneously in the notion of the syllable »Om« as the sound of the universe and contemporary physical models of the universe as a wave or vibration [in Hennix's recent work, the Hubble frequency, which she defines as »the lowest possible frequency the universe can sustain at any future time« (Rag Infinity pamphlet)]. Works of long duration bring up the question of ancestry. Hennix wrote of her own pieces that they should not be understood as having a beginning and end corresponding to the moment of performance, but that their performance is without end, and is merely suspended or become inaudible at certain moments. In this sense, drones are a great example of what Timothy Morton has called »hyperobjects«, »objects« so vast that we can never perceive them fully, but whose vastness is nonetheless evident to us when we are immersed in one. Which is perhaps another way of saying that a drone is an environment, and that for composers like Niblock, the space in which a drone is played is an important aspect of composition, improvisation, and performance.

A press release from NASA dated 9 September 2003¹⁾ announces that Astronomers from »NASA's Chandra X-ray Observatory detected sound waves, for the first time, from a supermassive black hole. The »note« is the deepest ever detected from any object in our Universe. ... The black hole resides in the Perseus cluster of galaxies located 250 million light years from Earth. In 2002, astronomers obtained a deep Chandra observation that shows ripples in the gas filling the cluster. These ripples are evidence for sound waves that have traveled hundreds of thousands of light years away from the cluster's central black hole. In musical terms, the pitch of the sound generated by the black hole translates into the note of B flat. But, a human would have no chance of hearing this cosmic performance because the note is 57 octaves lower than middle-C ... At a frequency over a million billion times deeper than the limits of human hearing, this is the deepest note ever detected from an object in the Universe.« What does such a drone do? Given that sonic vibrations generate heat, the sound waves emanating from the Perseus black hole potentially contain »the combined energy from 100 million supernovas«, enough, astrophysicists believe, to stop the gaseous matter around black holes from cooling and forming stars. It is thought that this sound wave has »remained roughly constant for about 2.5 billion years.«

Marcus Boon is a writer and Professor of English at York University in Toronto, where he teaches contemporary literature and cultural theory. He writes about music for *The Wire* and *Boing Boing*. He is the author of *The Road of Excess: A History of Writers on Drugs and In Praise of Copying*, both from Harvard University Press. He is currently editing a book of conversations with Berlin-based composer Catherine Christer Hennix, and a manuscript entitled *The Politics of Vibration*. *** www.marcusboon.com

¹⁾ NASA News from 9 September 2003: »Chandra »Hears« A Black Hole«; www.nasa.gov/home/hqnews/2003/sep/HQ_03284_Chandra_Hears.html.

COMING TO TERMS WITH SOUND

BY BJORN GOTTSTEIN

Photo by Barbara Fahle.

The fascination with aural perception and how to expand the experience of music, while existing in different degrees throughout different eras, reached a new level of intensity in the 20th century when diverse and unconnected musicians from all around the world began exploring new approaches to sound. From this fascination emerged movements such as serialism, championed by luminaries such as Stockhausen, Reich, and Cage, but also musicians working in counter-current to dominant trends, such as Ernstalbrecht Stiebler.

In the early 20th century, the Austrian biologist Paul Kammerer coined the concepts of »the law of the series« and the »duplicity of events«. These laws can also apply to the history of music. Much has been invented several times over without a direct link ever being drawn between events, e.g. the double reed, the string quartet, dodecaphony...

At the same time, across decades and continents, musicians came to the realization that we would have to approach sound differently than in the past, that we must create a different sensitivity to sound in order to significantly expand the experience of music. That this was recognized by such diverse musicians and composers such as Giacinto Scelsi, Eliane Radigue, Klaus Schulze, or Bernhard Günter to name only a few, and that these musicians were mainly not aware of each other, illustrates the fact that the history of ideas of music cannot be derived from biographies of individual artists but must be seen as a social movement.

Ernstalbrecht Stiebler is yet another musician to have contributed to a new understanding of sound since the 1960s. Stiebler, born in Berlin in 1934, had studied composition in Hamburg and attended classes with Karlheinz Stockhausen in Darmstadt. Even in the 1950s, he inwardly rebelled against the codes of serial music, which determined music through series and parameters by using constant change and the non-identicalness of events, thus creating a constant state of musical unrest. In the late 1950s, this uneasiness with the teachings of his mentors led to a first encounter with John Cage, who was then preaching a different music, one that is not subject to the will and taste of the composer, but unfolds in a random and disjointed manner. Stiebler, who at that time was already familiar with the teachings of yoga, could relate to Cage's Zen Buddhist-inspired thought, even if today he admits that Cage's monastic essence appealed to him less than the freer and more informal use of sound and form pursued by Morton Feldman.

As a result of these impressions and thoughts, Stiebler composed the string trio »Extensions I« in 1963. With long tones, little movement, and much repetition, Stiebler took the step towards a music increasingly free of expression and gesture. By focusing only on a few notes, by repeating tones and intervals, and by choosing slow tempi, Stiebler gave sound new opportunities for development. This leads to a different sensitivity, where the listener almost inevitably enters into the internal structure of the sound. For example, if the pressure of the bow is increased on a cello string, then the sound not only gets louder, but the overtones also change. To perceive these changes takes time, however, and the composer must grant the sound that time.

Stiebler, alongside composers like Giacinto Scelsi, count among the first to have shaped the inner workings and phenomena of sound to make them tangible. Around 1960, composed music began to include an experience of sound as can be found in trance and ritual music, and with instruments like the didgeridoo. Stiebler does not fundamentally reject spiritual connotations; meditation is a very precise exercise that requires a high level of concentration and ultimately enables another state of consciousness, and such a state is something that one can, or even should, wish to achieve from an aesthetic experience.

Through reductionism, repetition, and slowing down, other phenomena enter into the listener's consciousness, including space. The temporal extension of the sound allows the physical (sound) wave to spread out in space, and this physical space then gives way to other spaces, which Stiebler calls »interior spaces«. In describing »interior spaces« Stiebler makes reference to the space-body concepts of Taoism, where in addition to the real body of space, there exists an aural body of space, an emotional body of space, a mental body of space, and so on. Music can not only create all of these spaces and make them tangible, but crucially also allows them to

flow and merge into one another. Through his work in differentiating sonic spaces in his compositions and his exploratory work with microtones, Stiebler helped open peoples' ears to the fact that we also can still learn to hear something between well-known intervals.

The fact that Stiebler's position has not quite been able to assert itself among other aesthetic standpoints, and that he is far from being recognized as a pioneer and visionary, has various causes. As a radio producer (1969-95 at Hessischer Rundfunk) Stiebler could not devote his full commitment to his own music, and as a concert promoter he refused to have his own works performed. Furthermore, the position the composer adopted is one of restraint; Stiebler and his music do not draw attention to themselves and they are not meant to be heard loudly. With such a discreet attitude, one wonders whether Stiebler had asked many questions before their time, and whether his body of work should be reassessed in retrospect. Indeed, questions about musical space, about the meaning of repetition, about the radical reduction of material, or the spirituality of sound, have been raised again and again in recent years, and in some cases have led to similar conclusions as Stiebler's work. Examples include the reductionist phase of Berlin's improvised music scene *Echtzeitmusik* (literally translated as »real-time music«), the Japanese *Onkyo* movement, the auscultation of space that can be found in sound art, or the recent preoccupation with Gilles Deleuze's *Difference and Repetition* in musical discourse, among others.

At the same time, there is one mistake that must not be made, namely to ascertain fundamental similarities in musical character based on similarities found under certain circumstances in the actual sounds, the sound design, or even in the aesthetic premises of works. What Giacinto Scelsi suggested in 1959 with his »Quattro pezzi su una sola nota«, what Eliane Radigue achieved in 1971 with »Chry-ptus«, what Klaus Schulze attempted in 1972 with his album *Irrlicht* – each of these are entirely distinct attempts to come to terms with sound.

It is important to understand that Stiebler's works are not composed intuitively or off the cuff: even if a fourth is simply struck in four different octaves on the piano, there are compositional strategies at work. Repetitions and pitch shifts do not occur based on the moment, but always with a view of the whole. Micro-intervals are carefully set in advance to sixths, etc.

Even if it is a fortunate coincidence that in the 21st century one can look back on so many similarities in such diverse musical currents, their differences are at least as significant. The question then is not so much to what extent Ernstalbrecht Stiebler and the discovery of slow tempos in the synthpop of the seventies share a common basis, but rather how they came to similar questions from such different angles. Such a question touches on the social psychology of an era, which merits a significant analysis.

Björn Gottstein is a music journalist and musicologist based in Berlin. He writes about electronic music and the history of the avant-garde. Since 2013 he is the editor for Neue Musik at the Süd-deutscher Rundfunk SWR in Stuttgart.

Translated from the German by Alexander Paulick-Thiel.

J'AI RÊVÉ D'UNE MUSIQUE ÉTRANGE ET BELLE QUI NE SOIT JAMAIS LA MÊME NI TOUT À FAIT UNE AUTRE¹⁾

THIBAUT DE RUYTER IN CONVERSATION WITH ELIANE RADIGUE,
BERLIN, FEBRUARY 1ST 2012

In 2012, CTM paid a special homage to French electronic music composer Eliane Radigue. Active for over 40 years, Radigue is considered by many a pioneer in electronic music, using synthesizer and tape to create pieces of long duration and deep contemplation. By reducing her compositions to a few sound events that gradually appear, overlap, recede, and oscillate in critical frequencies over long periods of time, Radigue produces a hyper-attentive environment in which each sound is maximally charged. Next to performances of her works »Naldjorlak« and »PSI-847« (the recording of which was published in 2013 by Canadian label Oral), Radigue appeared at CTM Festival for an interview with Thibault de Ruyter. Her strong artistic presence, coupled with a relentless, dry humour, evokes a vision where the distinctions between sound and silence, sameness and difference, are completely blurred.



Eliane Radigue with Bruno Martinez, Carol Robinson and Charles Curtis, Bologna 2010. Photo: Massimo Golfieri



Thibaut de Ruyter: *We will begin with the links between electronic and acoustic music. You have not made music on machines since 2004. Yesterday we heard an acoustic concert, and tonight we will hear a piece for synthesizer. However, I've already heard you say that »It's the same thing«...!*

Eliane Radigue: Not exactly. I am very obstinate and stubborn. At a certain period of time, my analogue synthesizer was bringing me close to the kind of music I wanted to create, but now marvelous musicians come closest to my research. The first time I heard them perform my work »Naldjorlak«, I thanked them, because at last I was finally hearing the music that I had always dreamed of. There is such subtlety in acoustic instruments. Electronic music is rougher, raspier. Less delicate and subtle. That is why my synthesizer and I separated, after forty years of marriage.

TdR: *This means that you would not have made electronic music forty years ago had you met musicians capable of playing your music back then?*

ER: I wouldn't have dared! Or rather, yes, different musicians had contacted me on two or three occasions, but when we would meet and when they saw what I was asking of them they would run off. When Charles Curtis approached me he knew perfectly well what I was doing, and he knew that I was not going to write him a new Bach suite! It is my personal musical genre, my dream, call it what you want.

TdR: *But there exist, nonetheless, analogous elements between electronic and acoustic music. For example, duration is an essential component in your work...*

ER: There are various levels of response for this. I will start with the material aspect. When I worked with wild electronic sounds, distortion, and feedback between a loudspeaker and a microphone, one must be extremely delicate and precise. When you get a little too close it shrieks, when you move away it disappears. It only takes a small, abrupt movement ... But when I found the right balance I could evolve the sound for as long as I liked. Therefore it required

slowness. It was the same story with the re-injection method using two tape recorders. I barely had to touch, barely had to brush against the potentiometers. This allowed me to overcome my impatience. Because, and this is the second important aspect: duration and slowness go hand-in-hand. I was always particularly sensitive to slow movements in classical music. For example, while the second movement of Maurice Ravel's »Concerto in G Major« is sublime, I could not bear to listen to the scherzo at the end. I would always stop the record before the end so as to stay in the second movement's atmosphere. I think I am slow, not always, but listening takes some time and the movement's tone profoundly suited me. In addition, when the synthesizer allowed me to begin to approach my musical vision, I noticed that one had to stay within very low registers in order to be more precise with respect to what was going on between the different sound layers and levels. This is why everything I do rarely reaches a mezzo-forte, and always stays in low pitch. And this forms a whole that I am only now beginning to understand. One must also take into

account the quality of silence, not in terms of its general use as a punctuation mark in music, but as the silence within which sound can integrate completely, that can live with the music. As if silence was space and musical vibrations animate it. Yesterday evening I was particularly sensitive to it: at first you don't hear anything although the sound is already there, it comes little by little, there is never a discreet unit of silence. All of this requires patience, time, and leads to the necessity for a long duration. I did not seek duration for the sake of duration. It is simply my working mode, my choices, and my options that compelled me to do so. But that did not bother me, quite the opposite in fact!

TdR: *At the same time, when we enter a dark space, it always takes some time for the pupils to dilate and adjust to the ambient lighting before starting to discern certain contours and then to see. The silence you speak of, is it not a way to force our ear to open, to capture our attention?*

ER: Absolutely! I will use a big word but it is a way to satisfy my deep longings, my »quest«. I'm finished, I will say no more on this subject. In order for there to be a union between silence and sound, and in order to perceive this union, we must first listen to silence. But it is true, you are perfectly right, our perception sharpens, it requires our attention, all of which can lead to a state of concentration that enables a much wider sensitivity. The image of the pupil is a nice example.

TdR: *But there is also something about the low volume in your works. I've always had the impression that this is related to your approach to silence.*

ER: The low volume is necessary, and it is a third aspect of my investment in music; to explore subtleties in the relationships between overtones, harmonics, sub harmonics. I think I owe that to the studio d'Essai on the rue de l'Université, and to the first time I heard the sound of a bell where we removed the attack. It was a totally different story, very rich. We can always experience this when a bell rings in the mountains. It stops, but there is a superb music that continues. If the fundamental note is too loud, even if this note is necessary since without it there is no sound, it sounds aggressive,

overwhelming our hearing. But if its volume is low enough we can better hear what follows - it sings on its own. Actually no, above all it is my marvelous musicians that, with their movements and breaths, make their instruments sing!

TdR: *The breath is another word that appears to me to be essential. I often have the feeling that your music breathes and, in a certain way, that we could make an analogy between the instrumentalist's breath and the hiss of the audio tape.*

ER: Yes, it's important. But let me go back to the first discoveries I made through wild electronic sounds. These always had the tendency to behave either as a sustained note, or as pulses and beats. Beats always contain rhythms that correspond to something: the heart, breathing. In itself I think that yes, there is breath, but I did not look for it as such, it is part of the sound. I admit that there are similarities, but I have no theory, I have no big statement, nothing sophisticated, nothing intellectual to propose.

TdR: *Did musical scores for your work exist at that time?*

ER: No. And another question that has often been asked of me is whether or not this music can be played live. The answer is definitely no. Even with six or seven synthesizers, it only takes a tiny something in the voltage control for it to become another story. That is the reason why I had to work on tape and, once finished with a piece, had nothing more to add. I had no reason to appear on stage with my superb instrument and pretend to be doing something. That is why I would place myself offstage to perform the works, as we will do tonight. There is only the sound.

TdR: *But how do you proceed today with your musicians if there is no sheet music? How do you communicate with them?*

ER: It is, first and foremost, the musicians who ask me. Charles Curtis had sent me a CD with several musical elements and I told him »I do my shopping. I want that, that, not that, not that...«. Incidentally, when he was asked what it was like to work with me he responded: »Oh, it's very simple, she says Yes or No!«. But it's also more complex than that. As for electronic music, I always have a

theme that becomes the spirit of the piece. Just as an architect needs a plan, scaffolding. But once the work is there, we can totally forget about those. I can tell you, for example, about the piece, »Naldjorlak«. The word only serves us as point of departure and, in general, all the processes are contained in the titles. »Naldjor« is a Tibetan theme for Yoga, and signifies »union«. »Lak« is a suffix of deference, of respect, and that also signifies »the hand«. But the term »Naldjorlak« does not exist. There are the masculine Naldjorpa yogis, the Naldjorma... This was my initial theme. From it developed a work built on three pieces: yoga of the body, yoga of speech, yoga of the spirit. This defined a structure, a prelude of structure. The reference to the body, for example, is obvious now that the cycle of the three pieces is completed. Performing solo, Charles Curtis strips his instrument and that is obviously the yoga of the body, whereas the duo of Carol Robinson and Bruno Martinez represent speech as their breaths answer one another. Lastly, the three musicians perform together, and their osmosis represents the spirit. Now, we do not have to know all this when we listen to them. It's obvious. We know it. That happens quite instantly. In any case, with my synthesizer, when I knew exactly what I wanted to do, I found my way very easily. One day my friend Michèle Bokanowski asked me to make her some sounds of »the silence of stars«. I told her this would be no problem; I had sorted everything out before holding the listening session. Then, when I tuned on the master volume, the sound was exactly it! Still, it was a stroke of luck (laughs). I was again referring to the Tibetan culture, for which the spirit is situated in the heart and not the brain. An emotional form of communication also exists. And non-verbal communication also works, with far less misunderstandings than with words. So I communicate with my musicians with gestures, and I don't deprive myself of anything. With »Yes or No«. And we recognize the moment a piece is finished. All of a sudden it's there. However, it becomes more and more extraordinary every time they play it.

TdR: *So these are pieces by them, for them, created with them...*

ER: And only for them! However, they are capable of transmitting the pieces verbally, if they so desire. Charles Curtis had already received such a request. When he asked me I told him: »it's up to you«.

TdR: *You speak of control and of duration. For me this evokes an image of a line, which is also a word that you employ. Charles Curtis' movements on his cello are, for that matter, extremely linear.*

ER: That goes back exactly to what I said in the beginning, about the issue of keeping a distance between a loudspeaker and microphone; it's acrobatic, it's linear, and there is very room to manoeuvre. But when it works, there is a result! There you go, we can stop here, I have come full circle...

Audience: *You say that each work has a story, that each sound has a place in each story. What is the link between story and sound and what do you discuss with your musicians?*

ER: Harmony always constitutes our genuine foundation, the fundamental sounds with which we work. With Charles Curtis it was obvious from the start, since the cello, like most string instruments, contains something that is feared by classical cellists: the wolf-tone. I have the feeling that the two soundboards of stringed instruments can knock sounds out of phase, producing a magnificent sound. I of course jumped on this sound right away. This sound is of a different pitch depending on the instrument, and it is very difficult to find its fundamental note. As with all musical instruments, tiny variations result from climate parameters such as higher or lower temperature, humidity versus dryness. In any case, that's where we start. Tuning the instruments backstage is unthinkable; we have to find the best resonance threshold from the instrument's body. It's about how the instrument behaves on a given day. What further interests me is the play of overtones. The fundamental note does not move, and there are low pulses and some small tones that I ask the musicians to control. We all know that European music had to be tempered or else we would have a huge difference between the low and high ranges. But personally, I don't care about that. On the contrary, that very small element of uncertainty, of indecision, interests me. What has always fascinated me in classical music, aside from slow movements, are the few bars of modulation where, by changing the scale, you reach the first accidental. This brings us into a climate of slight uncertainty. I adore ambivalence. I adore ambiguity. In this regard I quote Verlaine, only changing one word: »I dreamed of a piece of music, strange and beautiful, which was never the same, yet never quite something different«. But Verlaine was referring to a woman. I do not know if that answers your question, but everything revolves around this extremely

nuanced and delicate contact. Let us go back to the example of Charles Curtis. I would have never accepted the mistreatment of an acoustic instrument. By playing on the cello's tailpiece and endpin, he enters the privacy of the instrument. He showed me what he could do and the structure appeared by itself. It was therefore natural to play the strings first, then the tailpiece, then the endpin and, finally, the two strings that fix the tailpiece to the instrument's body. And there, I was flabbergasted by that sound. I would want so much to be able to record it and slow it down since I am certain it develops numerous harmonics. I don't know if someone could do this someday. I could have done it with my old magnetic tape recorder systems, which I constructed and fiddled with my entire life. But apparently, in our digital age it has become very complicated.

Audience: *I heard Charles Curtis perform »Naldjorlak« in three different venues and I would like to know how the architecture influences the technique, the interpretation?*

ER: The first thing is to evaluate the venue's acoustic response. In Riga he performed in an old industrial building that was not very good, the first task was to find the best location to place ourselves in order to create optimal acoustics. That theater is very beautiful; it does not have a flat acoustic but is not too resonant either. They played in New York, in a big hall made entirely out of reverberating marble. Fortunately the hall's acoustics changed when 400 spectators arrived. By the way, if you've heard the piece three times, you must have heard three slightly different versions?

Audience: *Yes!*

ER: Never the same thing, yet never quite something different. According to each day's base harmony or the acoustic response of each location - each time an original story that continues.

Thibaut de Ruyter is a Berlin-based architect, critic, and curator that harbours a lifelong passion for music. He is a regular contributor to art press, *Il Giornale dell'Architettura*, *Fucking Good Art*, and has written essays for various catalogues. He curated the exhibition »Ghosts Off the Shelf« for CTM Festival's 2012 edition.

Translated from the French by Catherine Genest.

*1) »I dreamed of a piece of music, strange and beautiful, which was never the same, yet never quite something different« is Eliane Radigue's rephrasing of Paul Verlaine's »Mon rêve familier«.

CHRONOPOETICS OF TECHNO-ARCHIVAL MEMORY^{*1)} BY WOLFGANG ERNST

The archive is not limited to textual records for historical research anymore. As an agency of memory supply the new archive consists of a multiplicity of time layers which ask to be dis-covered with advanced technologies. Techno-archival memory can be identified as »chronopoetic« since it is not a not passive container of records from the past but dynamically creates forms of temporal affect and insight when coupled with human sensation and algorithmic decoding. Since the notion of the archive has been extended to the storage and processing of signals from the past (notably optical and phonographic storage media), a memory comes into existence which addresses perception as an ongoing or repeatable presence, resulting in a different, almost sonic aggregation of layered temporalities. Once archival memory is liberated from its subjection to the historical discourse, it is re-installed as an agency of temporal knowledge in its own right.

Tempor(e)alities: Archival *Eigenzeit*

The term »tempor(e)alities« oscillates between temporalities and tempo-realities. This refers to the inherent temporal essence of archives as memory institution and storage apparatus. There are conflicting time regimes at work in the archive: on the one hand, it is meant to suspend time to keep information for future memory (negentropic time); on the other hand, it is subject to time at work (entropic processes, material decay); thirdly, the speed of access, migration, and short-time memorial functions of the archive increase.

For centuries, the archive has been an agency of dis-continuity, setting the memory of past records apart from the administration of the present. This spatio-temporal distance implodes once archival data is electronically coupled *online* to Internet-based access. More or less immobile cultural materialities of memory lose their heterotopic and heterochronic quality of resistance against the logocentric tyranny of presence in favour of immediacy.^{*2)} Against that background, old-fashioned archival resistance becomes a virtue in the time of networked records which dissolve into *cache*-buffered streaming data.

With its current theme »Dis Continuity« CTM 2014 reflects on the growing tendency to reference the past. This suggests that which marks the popular and experimental culture of today is not just cultural nostalgia of a society which has lost its avant-garde bias but, as well, a direct function of its storage technologies which become an integral part of present data circulation and processing. When the traditional archive thus gets mobilized, it transforms into a short-time intermediary memory of the present itself.

What looks like an increasing drive for historic »retro« references in fact deconstructs the dominant time model of history itself. Applied to sonic culture, this argument becomes almost self-referential. Whereas before the phonograph any sonic expression (be it speech or music) had to be symbolically transformed into music notation in order to survive in time, with technical recording sound immediately becomes inscribed into a non-historical, non-human, signal-based archive of a new kind which literally has to get in motion (like the turning disc or the hard drive) in order to get re-presented:

»The concept of linear, historical time is denied, if not actually eliminated, by the electroacoustic media. [...] the concept of a linear flow of time becomes an anachronism.«^{*3)} Nonlinear temporal short-cuts undo narrative and storytelling which are the underlying tools to achieve the historicist effect. The formerly »historic« relation between presence and past is replaced by a cybernetic concept of immediate feedback and dynamic resonance; thereby it becomes sonic itself - with the neologistic term *sonicity* referring here not to the audible manifest sound but to the implicit tempor(e)ality which is connected with vibrating, oscillatory and frequential articulation.^{*4)}

CTM 2014 Festival *Dis Continuity* explicitly refers to past artistic experimentation, protagonists, and movements offside well-beaten paths. This approach is archival rather than historical. Whereas most narratives of musical evolution over the past centuries favour exceptional protagonists whose achievements are undisputed, the archival co-existence of records does not suggest any hierarchy in itself. The texture of the archive itself mirrors the complex fabric of musical threads. Whereas historiography's task is to identify and decide upon main storylines, truly archival navigation detects interconnections, parallels, and short-circuits. The simultaneous arrangement of files allows for jumps to other addresses like in digital computer storage. Synchronisation replaces the historical discourse here, leading to an aesthetics of many pasts folded into the present in latency. Whereas such moves in textual records are necessarily hypertextual, with sonic records hypertemporal navigation is possible since they represent time objects themselves. Just like access to records in an archive is a rather spatial and topological act, nonlinear links of the present to the past requires a different description, which Michel Foucault once termed *archéologie*. In his *Archaeology of Knowledge* (FO Paris 1969) he argued for an active self-distancing of the present and a new respect for dis-continuities.

The archive is not a coherent depository for memory supply but a multiplicity of layers to be unfolded with and within memory technologies. These techno-archival temporalities can be identified as *chronopoetic* once they are not passive storage but dynamically driven by algorithms which finally affect the human sense of time. Since the notion of the archive has been extended to the storage of audio signals, a memory has emerged which is capable of addressing human perception in repeatable hyper-presence; this does not only represent, but actually enacts different aggregations of the past. This leads to an epistemological liberation of archival memory from its reductive subjection to the discourse of history in favour of an agency of multiple temporal poetics.

The archival challenge to historiography

Archives have their inherent temporality, their *Eigenzeit* as memory institution and storage technology. The tempo-realities they generate refer to the function of the archive both *within* historical time and as the condition (the Kantian *a priori*) of writing history. For historically orientated disciplines, the archive provides the fundament to write historiography. The notion of a macrotemporal coherence called history and its discursive power - as frequently emphasized by the media philosopher Vilém Flusser - has its essential precondition in the linear writing of the phonetic alphabet; one-dimensional textualities unfold in a literally progressive sense of time. But as a symbol-calculating machine the archive itself is radically different from narrative history, closer to »data bank aesthetics«^{*5)} which is ahistorical and rather represents a different temporal aggregation of what is commonly called *the past*.

The archival order is a non-narrative alternative to historiography. Archivology is not just an auxiliary discipline to history but a genuinely alternative model of processing data from the material archives of the past. While historical discourse strives for narrative coherence, archival aesthetics deals with discrete, serial or discontinuous strings of information which in the age of computing gains new plausibility against literary forms of historical imagination as developed in the 19th century.

As data bank structures, the archival mode of memory as record management is a non-narrative alternative to historiography, in the best tradition of early 20th century avant-garde which »questioned all models of memory (especially narrative ones), favouring openly dynamic, discontinuous forms contiguous with the modern means of technological reproduction, especially photography and film«⁵⁾. An archival collection of photography (different from private photo albums) does not aim at a meaningful story; on the contrary, it rather deconstructs narrative. Archival logistics in the correlation of data undercuts the narrative by discrete counting (alphanumeric metadata). The tight coupling of symbolical evidence in forms of oral or literary stories is being replaced by a loose archival coupling (truly *medium* in terms of Fritz Heider⁶⁾), as becomes manifest in the genealogy of photographic archives:

»Although individual sequences of pictures were often organized according to a narrative logic, [...] the overall structure was informed not by a narrative paradigm, but by the paradigm of the archive. After all, the sequence could be rearranged; its temporality was indeterminate, its narrative relatively weak. The pleasures of this discourse were grounded not in narrative necessarily, but in archival play [...].«⁷⁾

When the past is confused with history, any archival record is immediately subjected to contextual knowledge. This transforms it from being an autonomous physical monument into a historical document. Foucault decided to reverse this operation:

»There was a time when archaeology, as a discipline devoted to silent monuments, inert traces, objects without context, and things left by the past, aspired to the condition of history, and attained meaning only through the restitution of a historical discourse; [...] in our time history aspires to the condition of archaeology, to the intrinsic description of the monument.«⁸⁾

Archival time layers

In its different formations, the archive consists of diverse temporal layers which demand for a description in terms which are not limited to the semantics of cultural history in order to re-configure it for future demands in the age of networked tradition of knowledge by technological media. The very term »tradition« shifts from its emphatic macro-temporal notion to the analysis of the time-based and time-basing micro-mechanisms of transmission. While tradition has been associated with long-time memories across deep historical time so far, this emphatic horizon now seems to shrink to a mere extension of the present (as its re- and protentive short-time »working memory«) - a dramatic shifting of the temporal prefix. Archives are in transition on their very operative level of electronic signal and data processing.

The traditional archive model is static, residential, a storage space which delays and defers time in the emphatic sense of ancient Greek *katechon*. »Siegecraft, once the art of defending the strategic cities of European states, has become the art of defending the archive«⁹⁾ - protected space in order to beat time. In terms of Harold Innis, the archive as a memory base belongs to the tools of empires which are temporally »biased« to keep legal claims and imperial laws in long-time endurance.¹⁰⁾

But with the acceleration of transport and communication media since the age of the Industrial Revolution, a shift of emphasis from emphatic long-time preservation to ultra-short intermediary storage took place - a direct effect of electronic media culture itself. The traditional mandate of the archive to preserve records for future use is inverted on the micro-temporal stage of digital operations in the present. Intermediary storage here is necessary for calculating the immediate future from the immediate past - the extended presence in times of predictive algorithms and Markov chains, as familiar from Edmund Husserl's phenomenology of subjective time sensation in terms of re- and pro-tention.¹¹⁾

While with the growing digitization of archival records the traditional archive loses its detachment from the administration of the present, presence itself in return becomes coupled to an exponentially growing archival memory. The new immediacy of archival presence in terms of *online* accessibility may be compared to a situation from the area of visual recording of movement. The production and projection of documentary films since the beginning of cinematography has been a rather heavy and slow apparatus-based and -dependent process, and copies were expensive. But in the late 1960s the first Sony portable video recorders (used by Nam June Paik) allowed for immediate playback of the recorded present.¹²⁾

Archival monumentality as suspense (epoché) from the temporal economy

Today, intermediary storage as *inbetween* time (in its Aristotelean sense of to *metaxy*) increasingly dislocates the tentatively eternal monumentality of the classical archive (and its records) on several levels: both as an institution of temporality and in its material sense (the volatility of electronic data). With the current liberal, broadened, electronically biased (thus liberated from spatial and material restrictions) use of the term archive, »online data collections labelled archives could in fact be better characterized as perpetual transmission rather than permanent storage«¹³⁾. What used to be secret spaces, secluded from public insight - the *arcana* of political administration and of their archival memory, the »secret archive« -, is now directly wired to the communication circuit of the present. The archive loses its temporal exclusivity as a space remote from the immediate present (access).

In an age of volatile, ephemeral electronic memories, memory itself has become transitory.¹⁴⁾ With such increasing mobility and acceleration, should we rather ask for an immobile archive as counter-memory?

This leads to a wish to arrest movement for longer intervals or at least for moments. In the age of YouTube and UbuWeb, movement itself gets archived.¹⁵⁾ The idea of an archive in motion is a para-

dox: the archive is traditionally that which arrests time, which stops all motion. For 19th century historians, the archive was in its essence an institution that made it possible to access frozen sections of past time. The archive, in this sense, cannot be *in* motion or produce motion. But the technological developments in the 20th century have inevitably forced the archive to confront the question of mobility, both practically and conceptually. Technically the archive *of* motion was introduced during the late 19th century, with the scientific desire to store and analyze temporal phenomena culminating, with the phonograph and cinematography. The transition from an archive of motion to the notion of an archive *in* motion is associated with the advent of computer technologies and ultimately the Internet, where constant transfer and updating redefine the temporality of the archival document.

Society is no longer based upon emphatic memory (as once suggested by Émile Durkheim) but on the permanent re-circulation of immediate pasts; therefore Niklas Luhmann defined society in times of technological media rather as a form of communication. Applied to memory agencies and especially the »digital archive«, this demands a new interpretation of its epistemological dimension. While the traditional archival format (spatial order, classification) will in many ways necessarily persist, the new archive is radically temporalized, »ephemeral«¹⁶⁾, multisensual, corresponding with a dynamic user culture which is less concerned with records for eternity but with order by fluctuation. New kinds of search engines develop into a new *art of the archive*. The *online* public rather uses the Google search machine than the Internet portals of national libraries to get access to printed and audio-visual memory. Will Web 2.0 and the emerging Real-Time Net replace the traditional guardians of memory (archives, libraries, museums), just as Internet radio and IP-TV is replacing the traditional broadcasting media?

Transformations of memory's mandate from endurance to immediacy

In Grimmshausen's fictitious novel *Baron Münchhausens Abenteuer*, the sound of a trumpet which is transient by definition is being frozen like winter ice, to be released in spring to sound again. Presence usually is being memorized by freezing the situation which means storing or fixing the signals. Recording is converting a time function into a place function - a transformation into *archival states*. Traditionally nonhuman agencies of memory such as archives, libraries and museums have been persistent over time based upon stability of storage as opposed to the volatility of subjective or collective memory. But the present archival condition is accompanied by a radical transformation on the technological side. The unitary zero / one processing of all kind of data within one meta-medium of digital computing has the consequence that the emphasis is not only on preservation of cultural heritage anymore, but also on immediate circulation - a cybernization of memory as feedback operations. Memory in the age of electro-mathematical media has become transitory, more than ever known from so-called oral cultures. In analogy to Walter Ong's famous analysis¹⁷⁾, a kind of »second mem/orality« takes place.

The negentropic effort: Archives as extended presence

Physical entropy has been the scientific justification of the notion of an emphatic time arrow (»progress« respectively »evolution«) in history and historical discourse. This is currently being replaced by a flat, almost anachronistic temporality. Digital media tend to divest themselves completely from their material body. This transformation has a dramatic epistemological dimension: The classical carrier-based archive (material storage) becomes an e-motional archive (in electronic motion) with electromagnetic ephemerality and latency. The gain of flexibility and computability is paid with a loss of durability. When years ago the Cologne Municipal Archive building collapsed, it became apparent that most material records, though being dirty and mutilated, survived this catastrophe, astonishingly resistant against the pressure of stones and against temporal entropy; the same is still true for most analogue audiovisual storage media like early daguerreotypes. Once the signals mechanically engraved (phonograph) or magnetically embedded (magnetophon) on material carrier has been transformed into digital, immaterial information, it can be (virtually lossless) »migrated« from one storage computing system to another. Permanence and archival endurance thus is not being achieved in the traditional way any more (which has been monumental fixation, *stasis* so far), but by dynamic refreshing. The notion of »the material« becomes dynamic itself - as identified by Henri Bergson.¹⁸⁾

So far the essential archival desire has been a negentropic cultural effort against cultural memory loss. But physical records themselves - be it text, sound, or images - are subject to entropy which the human eye and ear immediately notices - e.g. the material deterioration of Edison sound cylinders and magnetic video tapes. Progressively, such records became dis-continued from the present. In contrast to this, after digitalization (sampling into binary symbols), a new kind of archival permanence is achieved: As code, records become almost time-invariant, sublated from change, leading to ahistorical immediacy in the moment of re-play.¹⁹⁾

From space-based to time-critical archives: Kairotic Internet tempor(e)alities

Nowadays, with the direct coupling of the archive to online communication, a reconnection of the formerly separate archive to the cybernetics of the present takes place, shifting the archive's epistemological status and temporality. While in former administration there has been a clear separation between the register (the short-time depository for administrative records which are not in current use but might at any moment be reactivated and therefore are kept in the operation room itself) and the »archive« (physically separated into a distant place for long-time legal claims), today the archive merges with the register itself. This compares with what happens within the computer imposes itself: In the Central Processing Unit, »registers« serve to store data for intermediary calculations - not to be called an emphatic »memory« at all. Directly associated with the CPU but external to it is the working memory which stores a) actual programs and b) the data to be processed, divided into ROM (Read Only Memory) and RAM (Random Access Memory).

In media archives of sound moving images, once the carriers are provided with a time code for nonlinear access to single frequencies and even individual pixels, memory becomes a function of its techno-mathematical encoding and compression. With increasing digitization of traditional material records, archives are becoming time-critical. As opposed to the procedures in the institutional archive, the time it takes for access to records in the electronic archive shrinks to a momentary flash. The new focus of archival theory is its temporal disposition. Historical memory transforms into archival addresses (and more precisely URLs). According to Marshall McLuhan this is due to the fact that archives and libraries are no longer based on the Gutenberg Galaxy of static texts but in the age streaming electrons and bits become the fluid technical condition of instant memorisation.

From a media-archaeological point of view, the traditional archive is deconstructed by the implications of online techniques. Since antiquity and the Renaissance, mnemotechnical storage has linked memory to space. But nowadays the residential archive as permanent storage is being replaced by dynamic temporal storage, the time-based archive as a topological place of permanent data transfer. Critically the archives transforms from storage space to storage time; only processually it can deal with streaming data in electronic systems. The archival data lose their spatial immobility the moment they are provided with a truly media-temporal index. In closed circuits of networks, the ultimate criterion for the archive – its separatedness and discontinuity from actual operativity – is not given any more. The essential feature of networked computing is its dynamic connectivity. Cyberspace is an intersection of mobile elements, which can be transferred by a series of algorithmic operations. In electronic, digital media, the classical practice of tentatively eternal storage is being replaced by dynamical storage »on the fly«. Classical archival memory has never been interactive, whereas documents in networked topologies such as Web 2.0 become time-critical for user feedback.

While emphatic memory transmission over time for relevant records has been traditionally based on the archive, electronic *live* transmission media, performing communication across space, by definition of their signals have been essentially memory-less. This again changed with digital communication which not only requires intermediary micro-storage in the very nature of digital calculation but also stores data on servers to networked access. In the future though, the Real-Time Web will be a set of technologies and practices which enable users to receive information as soon as it is coded, »rather than requiring that they or their software check a source periodically for updates.«^[20] Search machines like Google already perform such real-time analysis based on giant servers farms which represent the universal archive of web sites already. Taking place in and being connected to »just-in-time« systems, technologies of memory become (trans-)mission critical. With *instant messaging*, the message of the medium (in McLuhan's sense) is immediacy which is the effect of co-presence in communication: cybertime which compresses time itself.^[21] The long-time chrono-emphasis of archival memory is thus being replaced by kairotic instantanization. The core function of micro-temporal storage devices is to let the data immediately become past. The figure of time here is the grammatical »future in the past«, based on a feedback operation.

Conflicting archival tempor(e)alities: Symbolic order versus order in fluctuation

Different from the traditional script-based institutional archive, the electrified archive (as organized by the internet) becomes radically temporalized. It is rather hypertemporal than hyperspatial, being based on the aesthetic of immediate feedback, recycling and refresh rather than on the ideal of locked-away storage for eternity. The aesthetics of recycling, sampling, and cultural jamming is a direct function of the opening and of the online availability of multimedia archives.

Once the archive is coupled to the online economy of time, such a data disponibility has created a cybernetic system of permanent recycling of the immediate and remote past.^[22]

The age of electric media generated what the art world spotted as »Fluxus«, literally: the flow (including steady-state in flow and order by disorder). Does the archive in motion lead to Fluxus? Instead of managing static words and images, »Fluxus« interprets life primarily in terms of music: overlaid waves, resonances, changing patterns. Leif Dahlberg (KTH Computer Science and Communication, Stockholm) actually proposes the »streaming archive.«^[23] With such archives-in-motion, a problem remains: How can the concept of the archive be opened to »heterochronic« experimentation and at the same time fulfil its traditional task of keeping a well-defined order intact for transmission into future memory? As symbolic order (which always already implies the machinic^[24]), archives are no time machines at all. They need external temporalization to generate a sense of history. From archival statistics (memory based on scriptural archives, listings, and charts as distribution in space) we move to stochastic time series analysis (dynamic remembrance based on algorithmic signal analysis of temporal series).^[25]

As long as the archival records consist of strings of symbols (i. e. alphabetic writing), a cognitive distance – in spite of the auratic qualities of handwritten manuscripts or autographs – can be more or less kept, since an act of decoding has to take place which involves the cognitive apparatus. But once photography and phonography, the first apparatus-based media in its modern sense, became subject of the archive, the sense-affective, presence-generating power^[26] of signal-based media cuts short the distance which is a prerequisite for *historical* analysis, in favour of mnemonic immediacy – the electric shock.

Archives emerged with the symbolical code of writing. The symbolical code can be transmitted (now »migrated«) with a high degree of fidelity in copying, regardless the material support. Thus the symbolic code (like the genetic code), esp. in the alphabet, is mostly invariant towards historical, i.e. entropical time. Digital data, which is: »information«, *per definitionem* (Norbert Wiener) are neither matter nor energy.^[27]

Central to streaming media are the algorithms which process and compress digital media formats like sound and moving images; such algorithms are the real archive (the condition) of the digital age. Documentary science therefore has developed the notion of »logical preservation«^[28]. At the same time, it is search algorithms and other analytic tools which set an archive of digital data in motion as opposed to the metadata orientation for classical archival order.

Against immediate access: Archival resistance

With all that getting-in-motion of the traditional archives, let me try a counter-analysis of archival insistence as resistance. The archive might now as a retro-effect rediscover its virtue as institutional monument: to interrupt the ever-speeding circulation and electronic economy, to arrest and fix and maintain chosen items, thus turning floating records from relational *documents* (files, data) into discrete *monuments* again, as *epoché* taken out of time. Archives of physical memory media (paper records, photographic negatives, phonographic Edison cylinders and gramophone discs, celluloid film, audio and video magnetic tape) ask for limitations on access not just because of their material fragility but for epistemological protection against immediate consumption.^[29]

Emphatic storage waiting for (re-)circulation belongs to the logic of late capitalism and thus is part of a memory economy. In a contrary way, a virtue of the traditional archive has been exactly that is was outside (historical) time. This *refugium*, this temporal exile from history, is in fact a kind of archival resistance against complete mobility which is the signature of modernist discourse. The old institutional archive served as a bedrock against the complete mobilization of records, as opposed to distributed digital archives and their open access in the Internet of today. More and more, archives find themselves both inside and outside the Web 2.0 or »social Web« economy. A gap opens between the necessity for archival services to the public versus defending archival secrecy (the *arcantum*) against the discursive tyranny of *open access*. With its becoming electronically *online* the archive is being deprived from its traditional power: its »privacy« in the literal sense, its *secrecy* from public discourse. The former *archivum secretum* (be it in the Roman Vatican, be it in the case of the Prussian State Archives) is not just an old-aged power instrument to be overcome in favour of immediate access. The actual archival secrecy is of a new kind, hidden in technology itself.

The sound of the archive: Silence

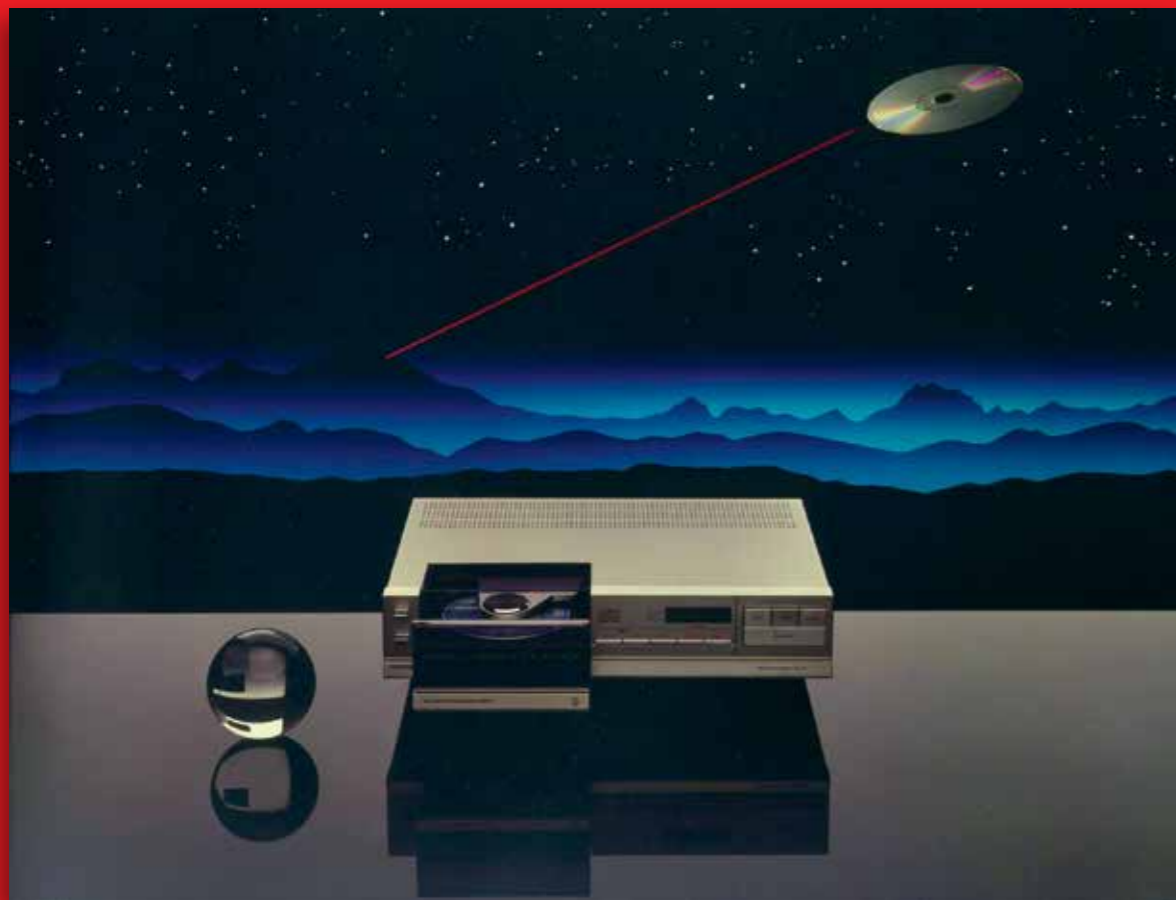
Let us finally listen to the sound of the archive. The traditional sonospheric experience in real archives is silence; historical imagination (as expressed by the Romantic French historian Jules Michelet^[30]) though hallucinates the voices of the dead. What is the sound of silence? Albert Mayr who calls himself a »time designer« is composing music with silence as the essential element; John Cage's famous piece for piano was (non-)playing 4'33 minutes of silence. Pure endurance is a Bergsonian time which passes. While an empty space within a painting positively endures with time, silence in acoustics is always a temporal (though negative) event itself. Historians will always remind us that there is no unmediated access to the past. But in the negative sound of the archive, its silence, we listen to the past in its truest articulation. Let us pay respect to absence instead of converting it into the spectres of a false memory.

Since 2003 **Wolfgang Ernst** is Full Professor for Media Theories at Humboldt-University Berlin. His main research focus covers media archaeology as method, a theory of technical storage, technologies of cultural transmission, time-specific technical aesthetics, and sound from a media-epistemological point of view (»sonicity«).

- *1) This text is based on arguments which have been discussed at the conference *Technologies of Memory* (within the »Archive in Motion« research project) on December 9/10, 2011, at the National Library in Oslo.
- *2) On such »heterotopic« agencies see Michel Foucault, *Des espaces autres* [*1967], in: *Architecture. Mouvement, Continuité*, no. 5, October 1984, page 46-49; on spatio-temporal »chronotopes« see the writings of Michail Bachtin.
- *3) Barry Truax, *Acoustic Communication*, Norwood, N. J.: Ablex, 1984, page 115.
- *4) For a similar approach, see Steve Goodman, *The Ontology of Vibrational Force*, in: same author, *Sonic Warfare. Sound, Affect and the Ecology of Fear*, Cambridge, Mass.: MIT Press, 2009, page 81-84.
- *5) See Lev Manovich, *Data bank as Symbolic Form*, in: same author, *The Language of New Media*, Cambridge, Mass.: MIT Press, 2001; Victoria Vesna, *Database Aesthetics. Art in the Age of Information Overflow*, Minneapolis: University of Minnesota Press, 2007.
- *6) See Fritz Heider, *Ding und Medium*, in: *Symposion*, Vol. 1, No. 2 (1927), page 109-157 (transl. 1959 as *Thing and Medium*).
- *7) Allan Sekula, *The Body & the Archive*, in: *October*, Vol. 39 (1986), page 3-64 (58).
- *8) Michel Foucault, *Archaeology of Knowledge* [*Paris 1969], London/New York: Routledge Classics, 2002, »Introduction«, page 3-19 (7f).
- *9) Thomas Richards, *Archive and Utopia*, in: *Representations* 37, Winter 1992, page 104-135 (125).
- *10) Harold Innis, *The Bias of Communication*, Toronto: University of Toronto Press, 1991.
- *11) Edmund Husserl, *Vorlesungen zur Phänomenologie des inneren Zeitbewußtseins* [*1928], 2nd ed., Tübingen: Niemeyer, 1980.
- *12) See Tjebbe van Tijen, *We no longer collect the Carrier but the Information*, interviewed by Geert Lovink, in: *MediaMatic* 8, No. 1/1994 (»The Storage Mania Issue«, translation: Jim Boekbinder).
- *13) Frank Kessler and Mikro Tobias Schäfer, *Navigating YouTube: Constituting a Hybrid Information Management System*, in: Pelle Snickars and Patrick Vonderau (eds.), *The YouTube Reader*, Stockholm: National Library of Sweden, 2009, page 275-292 (276).
- *14) As already expressed in Vannevar Bush, *As We May Think*, in: *Atlantic Monthly*, July 1945.
- *15) See Ekehard Knörer, *Trainingseffekte. Arbeiten mit YouTube und UbuWeb*, in: *Zeitschrift für Medienwissenschaft*, Vol. 5, No. 2/2011, page 163-166.
- *16) See Wendy Chun, *The Enduring Ephemeral, or The Future Is a Memory*, in: Erkki Huhtamo and Jussi Parikka (eds.), *Media Archaeology. Approaches, Applications, and Implications*, Berkeley/Los Angeles/London: University of California Press, 2011, page 184-203.
- *17) See Walter Ong, *Orality and Literacy: The Technologizing of the Word*, London: Methuen, 1982.
- *18) See Maurizio Lazzarato, *Videophilosophie*, Berlin: b-books, 2002.
- *19) On the current »atemporal« cultural condition, see Simon Reynolds, *Retromania. Pop Culture's Addiction to its own Past*, London: Faber & Faber, 2012, page 397.
- *20) http://en.wikipedia.org/wiki/Real-time_web (accessed January 20, 2010).
- *21) See Geert Lovink, *Was uns wirklich krank macht*, in: *Frankfurter Allgemeine Zeitung*, No. 140, June 21, 2010, page 27 (referring to media theorist Franco Berardi).
- *22) As declared in the thematic abstract of the festival *Re-*. Recycling_Sampling_Jamming. Künstlerische Strategien der Gegenwart* (Berlin, Akademie der Künste, February 26-28, 2009).
- *23) Oral communication to the author, Stockholm, May 19, 2009.
- *24) See Friedrich Kittler, *Die Welt des Symbolischen – eine Welt der Maschine*, in: same author, *Draculas Vermächtnis. Technische Schriften*, Leipzig: Reclam, 1991, page 58-80 (68), referring Jacques Lacan.
- *25) See Axel Roch, *Claude E. Shannon. Leben und die geheime Geschichte seiner Theorie der Information*, Berlin: gegenstalt Verlag, 2009, page 112.
- *26) See Hans Ulrich Gumbrecht, *Production of Presence. What Meaning Cannot Convey*, Cambridge: Stanford University Press 2004.
- *27) See Rudolf Gschwind and Lukas Rotenthaler (interviewed by Ute Holl), *Migration der Daten, Analyse der Bilder, Persistente Archive*, in: *Zeitschrift für Medienwissenschaft* 2, 1/2010, page 103-111 (104).
- *28) Hans-Joergen Marker, *Data Conservation at a Traditional Data Archive*, in: Edward Higgs (ed.), *History and Electronic Artefacts*, Oxford: Clarendon Press, 1998, page 294-303 (296).
- *29) Rick Prelinger, *The Appearance of Archives*, in: Pelle Snickars and Patrick Vonderau (eds.), *The YouTube Reader*, Stockholm: National Library of Sweden, 2009, page 268-274 (271).
- *30) See W. E., *Das Rumoren der Archive*, Berlin: Merve, 2002.

DIGITAL AUDIO: REMASTERING & RADICAL REVISIONISM

BY PAUL PURGAS



Mid-1980s Philips advert for one of the first manufactured CD players.

Since the establishment of the Compact Disc as a standardized digital media format, the music industry has been preoccupied with the possibilities of remastering. The practice initially stemmed from the switchover from producing CDs by directly transferring analogue LP and tape masters to digital, to producing digitally optimized CD masters. This act of translation was framed as »remastering«, a means of describing what has since developed into a hybridized practice of cosmetic audio restoration, re-equalization, and the interpretive modernization of music.

Within the semantics of commercial audio, the remastering process operates as an umbrella term somewhere between mastering (the act of preparing a finalized audio production) and remixing (a re-imagining of a song or composition through sonic and structural manipulation). At its core, a »remaster« is most commonly understood as a well-intentioned restoration of an archival recording that preserves the character and integrity of the original. However, this premise has over the years been demonstrably prone to certain pitfalls and interpretive developments.

As record companies set about creating digital masters directly from original LP and analogue tape masters during the first wave of CD production, they employed flat equalization, producing what were in essence non-manipulated digital copies of original analogue recordings. However, these early CDs were often heavily criticized due to the fact that LP and tape masters were optimized for the analogue format and not the specifications of a digital medium. It was not uncommon for early CD re-issues to be labeled with the following public disclaimer:

»The music on this Compact Disc was originally recorded on analogue equipment. We have attempted to preserve, as closely as possible, the sound of the original recording. Because of its high resolution, however, the Compact Disc can reveal limitations of the source tape.«

The statement, much like current debates between HD video and celluloid, implicates the high resolution of a digital system as the source for exposing previously unperceived errors in the medium. While there was an inherent technical truth in the disclaimer, it was often employed as a convenient excuse for labels looking to cut corners in production. For example, the high resolution of CDs was blamed for general bad practice, such as using tape cassette copies of albums as source material for digital transfers. In parallel, in the rush to bring CDs to market in this early period, record companies often worked with cheap chemical production processes that led to low-quality physical CDs. When coupled with the problems of early generation CD players with primitive analogue-to-digital converters, this created results that were widely regarded as sounding both brittle and hollow. It was only in the mid-1980s, when digital technology had developed and the CD market had grown, that record companies started mastering specifically for the CD format. It was at this time that the act of producing a specialized digital CD master from original analogue recordings resulted in what is now widely understood as »digital remastering«.

Commercially, the potential of the digital remaster provided significant opportunities for record companies. As a result of early remastered albums creating blockbuster sales, labels realized that re-issued archival recordings from their back catalogues were in fact capable of competing with new releases in the marketplace.

Hence from the mid-1980s onwards, the major labels looked to capitalize on their commercial libraries, revisiting classic releases from the likes of Kiss, The Beatles, Led Zeppelin, and the Rolling Stones, offering fans the opportunity to experience what were marketed as superior recordings to the previously available direct analogue transferred CD releases. The process was defined as providing restoration to the analogue masters and crisper, higher resolution recordings, with a focus placed on noise reduction and a cosmetically cleaner sound.

However, by the early 1990s, remastering had become an accepted industry practice, and greater consumer pressure mounted for remastered albums to be able to justify their existence and commercial value. There emerged an expectation that these releases would present audible developments and enhancements from not only the original analogue material, but also previously remastered versions of the same recording. Within this context, the studio engineers responsible for remastering came under greater public pressure to tangibly justify their work. It was within this critical moment that an evolution of remastering practice occurred, moving beyond its previous foundation of restoration and transparency and shifting towards an interpretive method of retreatment that set out instinctively to generate more demonstrative aesthetic results.

One of the most controversial contemporary remastering methods to emerge from this period was the application of audio compression. Compression has been employed in recent years as a means to boost the overall perceived loudness of recordings by squeezing the audio signal into a dynamically flatter yet comparatively louder master. Excessive compression is applied to contemporary pop music to generate maximum impact during playback on mp3 players and stereo systems. The influence this has had on the remastering process has been the emergence of heavily compressed re-issues, such as remastered albums by Nirvana, The Stooges, and Metallica, reengineered to be capable of competing with the overall loudness of contemporaneous pop and rock records. This method was generally most prevalent in remasters of rock and pop albums that were focused on sonic impact and high energy, and it significantly affected genres such as metal, punk, hard rock, industrial, and hip-hop. Most notably, The Stooges' 1997 remastering of the cult album *Raw Power* was notorious for its relentless use of compression that resulted in a virtually flat waveform and one of the loudest CDs ever made.

From a technical point of view, compression works as a practical tool for boosting levels on recordings. However, compressors ultimately have to make a trade-off, and this comes in the form of dynamic range, the audible difference between loud and quiet elements within a mix, which is lost as the audio signal is squashed into a flatter waveform that sounds louder but ultimately possesses diminished overall dynamics. The result of excessive compression

in remastering has been less dimensionally rich revisions of vintage records, which often sound shallow when compared to their considerably more dynamic original recordings played at equal levels.

The secondary process often excessively applied within remastering is equalization. Initially employed as a means of removing noise and hiss from analogue masters, it has more recently been used to impose more modern tastes and aesthetics onto old recordings. This potential interpretive reappraisal of the frequency spectrum ultimately lies in the hands of the remastering engineer, and the extent to which a cosmetic enhancement crosses over into the territory of manipulation is ultimately dependent on the perspective of this individual. Unwarranted or excessive equalization and brightening are significant factors in discerning why certain remastered albums by bands such as New Order, The Cure, and Black Sabbath have been rejected by their core fan-base, with complaints ranging from a loss of original feeling to more extreme reactions pinpointing a sterile and homogenized sound. In the case of equalization, specific frequencies are either excessively removed or boosted, which can interrupt the overall sonic signature and balance of the recording and begin to destroy the primary essence of the original.

Seemingly in comparison to commercial pop and rock, the issue of remastering has rarely, until recently, been a point of concern within electronic dance music. The general practice of the re-issue was focused on the vinyl 12" record, the medium of choice for DJs, and around adding volume to pressings previously considered too quiet for club play. However, some of the most extreme manifestations of remastering techniques have recently begun to emerge within the sphere of electronic dance music.

Over the last five years, there has been a growing nostalgia for revisiting early electronic dance genres, such as Detroit techno and Chicago house, partly triggered by new youth audiences discovering this musical legacy. These circumstances have created a problematic framework for revisiting archival recordings, including many from the late 1980s historically appreciated for their raw aesthetic and idiosyncratic technological production. In the case of the recent *Rush Hour: House of Trax* remasters from Chicago house label Trax, the complexities of revisiting the past through the demands of the present have produced some notably controversial outcomes. Remastered Trax releases significantly manipulated the frequency balance of the original recordings, creating crisper treble and a resiliently dense low end previously nonexistent in the material, and were intentionally re-engineered to the specifications of current high-resolution digital club soundsystems such as the Funktion One. While commercially marketed as remasters, these releases significantly revised the original recordings through the perspective of a contemporary dance studio engineer, who would have been aware of current trends in extreme bass production as well as contemporary genres and audio technologies. Within these remastered versions, the application of excessive equalization was so dominant as to quantify a radical representation of the original recordings. The remastered records were thoroughly dislocated from the defining lo-fi quality of the originals, and were rendered

in the manner of precision-engineered contemporary house and bass music.

This example isolates the complex interaction in the remastering process between conservation of the past and the desire for technological and aesthetic modernity. Drastic methods are perhaps due to the extreme sonic demands and progression of electronic dance music, and the evolution of club sound systems, over the more static demands of commercial pop. Nonetheless, what emerges in the underground sooner or later generally begins to manifest within the cultural mainstream. Extreme remastering, while at present seemingly isolated to underground music, may well leave the door open for broader revisionist methods in music's future.

This situation demonstrates that the relationship between a musical past and present has become seemingly unmoored. There is now an increasingly liquid and interpretive approach to the treatment of past recordings that seems destined to drift further away from any sense of a revered original artistic recording. Archival remasters are now engaged in a broadened dialogue that embraces technological advancements and media aesthetics as well as consumer demands and wider cultural tastes, ultimately creating a feedback loop between the past and the present. This feedback effect forms a set of conditions likely to further dislodge the act of remastering from its traditional foundations within audio restoration and keep shifting it incrementally closer towards the state of the remix.

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Paul Purgas trained as an architect and graduated from the Royal College of Art in 2004. He has curated contemporary art and sonic performance projects for Tate Britain, Frieze Art Fair, Bold Tendencies, and the De La Warr Pavilion. In 2005 he founded the experimental electronics project Emptyset with James Ginzburg. They are currently releasing material through raster-noton and have presented projects at Kunsthalle Zurich, Unsound, the V&A, and Architecture Foundation.



CURATING THE PAST, CREATING THE FUTURE: DJ AS TIME LORD

BY HILLEGONDA C RIETVELD

Hillegonda C Rietveld discusses the afterglow of the performative role of the DJ, pointing to the unsettling blend and fissure between the studio producer and the staged DJ in which digital music performance technology plays an important role.

DJs remix the past into the present as they curate a contemporized sense of history from a vast electronic dance musical archive. We have been dancing to recorded music for a good century now, in particular to jazz and R&B. This was intensified after the vinyl format was introduced by Columbia during the late 1940s, making recordings less vulnerable to breakage and therefore more portable than the brittle Shellac discs. RCA-Victor adapted this in 1949 for their 45rpm 7" music singles, which normally featured one track per side and, due to the large hole in the middle, could be used in a jukebox. From roughly the 1950s onwards, DJs in the UK and the US started to employ the dual turntable - previously used in cinemas - to curate a continuous soundtrack for their dancing crowds.

During the process of mixing two recordings, *the third record* came into existence. For example, Albert Goldman reports in his 1978 publication, *Disco*, how by 1970 in New York, the Italian-American DJ Francis Grasso mixed two overlapping recordings with the use of a monitor headphone. In 1982, David Toop noted in *Rap Attack* how hip-hop DJs mixed the instrumental sections of a pop song, >cutting between the same few bars on two turntables, extending the break into an instrumental. One copy of a record - forget it.*¹¹

Together with the narrative structure of the music selection, the third record is the *nomadic* component of the DJ's curatorial practice, in the sense that it is an improvisatory mix, a fleeting authentic moment of interaction between the various elements that make up a dance night: the dancers, the space, the moment, the DJ, the archive of available recordings. Over the years, DJs have explored a variety of narrative strategies, from the hedonistic flow of funky disco and the spiritual repetition of trance dance to the antagonistic musical rupture that can be heard in rap, turntablism, and reggae sound clashes. During these genre specific techniques, the archi-

val past of recorded music is brought into the present and into the embodied presence of the dance floor.

Since the 1970s, dancefloor-friendly (re)mixes are produced to blend in with the music mix of a particular DJ, suiting the tastes of their specific dance crowds. According to Dick Hebdidge in *Cut'n'Mix*, reggae sound systems in Kingston, Jamaica upped the competition against each other by introducing the production of unique dubplates, pioneered by King Tubby from 1968 onwards. In a parallel world of New York discotheques, the 12" disco single developed as a DJ tool and became commercially available by 1976. Stems of vocals and instrumental tracks are mixed by the DJ/Producer to emphasize rhythm sections, cut and given a new spot in the musical structure, and combined with new instrumentation to contemporize the overall sonic texture. Such music production practices genealogically connect specific contemporary dance music genres to relevant DJ cultures of the past - for example, UK breakbeat DJs still work with the dubplate, even if this exists as a digital file in the possession of one DJ or DJ team. Yet, as the economic weight may be more in the auratic exploitation of studio recordings than in the authentic DJ performance, remixed back catalogues can be cynically exploited to engage crowds of thousands.

Genre bending, transcultural sample hopping, surfing oceanic waves of an ever-growing archive of recorded sounds, the creative potential for remix re-combination is vast, yet limited by market and industry demands. A brief rappadelic radio mix here, an orchestrated diva mix there; a banging trance mix for the backpackers, a wobbly dubstep mix for the kids. Although this may lead some aging sample-spotting connoisseurs to interpret this as a nostalgic approach to dance music production practices, I suspect that a new generation does not necessarily make such connections. His-

torical (arte)facts blur into a new present through slippery creative processes that seem similar to what Foucault (via Nietzsche) calls *counter-memory*; the practice of the DJ not only creates and reveals memories of nostalgic origin, it simultaneously breaks linear chronologies within the mix. In this way, young dancers can experience mixed and re-mixed music as new, in a soundtrack that is nevertheless authenticated by snippets from forgotten or unknown pasts that are yet to be discovered anew by new keen dance music fans.

DJ practices have increasingly shifted the practice of blending and re-mixing into a live performance of electronic and sampled music creation. During the 1980s, competitive DJs in genres such as electro and house would utilize synthesizers and special effects (like echo and phasing), as well as drum machines to boost and change their collection of vinyl-based dance music, in addition to specific remixes. This practice is now further enhanced by current digital DJ technologies, first using CDs but now software-based, allowing digital music files to be sampled, restructured, and manipulated on the spot.

Because beat-matching, or syncing, can be automated on CDJ mixers and with software such as Traktor Pro or Serato, the focus of the DJ-driven dance event returns to music selection and to the overall structure of the musical journey. In other words, as Kai Fikentscher pointed out in 2013, music programming once more becomes an important aspect for a DJ performance. DJing producer Deadmau5 (Joel Zimmerman), whose show incorporates his unmistakable mouse-like logo that is worn as a mask throughout, argued in 2012 that with the synch button, anyone could be a »cheesy« DJ. Nevertheless, a successful dance event requires more complex creative skills, in which both »reading« the crowd, as well as effective music selection play a role.

Music editing software entered the DJ arena over a decade ago. Rather than blending two, three, even four recordings, music sequencing software like Ableton Live enables live composition through the use of fragments from multiple sources, as well as the repetition of specific components from one source through the entire mix by way of refrain. Effects and digital instrumentation can be added to the soundtrack with relative ease. Original recordings can be mixed into the overall musicscape during an improvised performance that also benefits from various degrees of studio preparation.

In the process of digital miniaturisation, the mobile virtual studio is effectively taken onto the stage, further blurring the lines between DJs and producers. Music production, remixing, dubplate practices, and music curation have started to rub shoulders, sometimes prickling an audience that expects to observe a risky, yet relatively simple, improvised

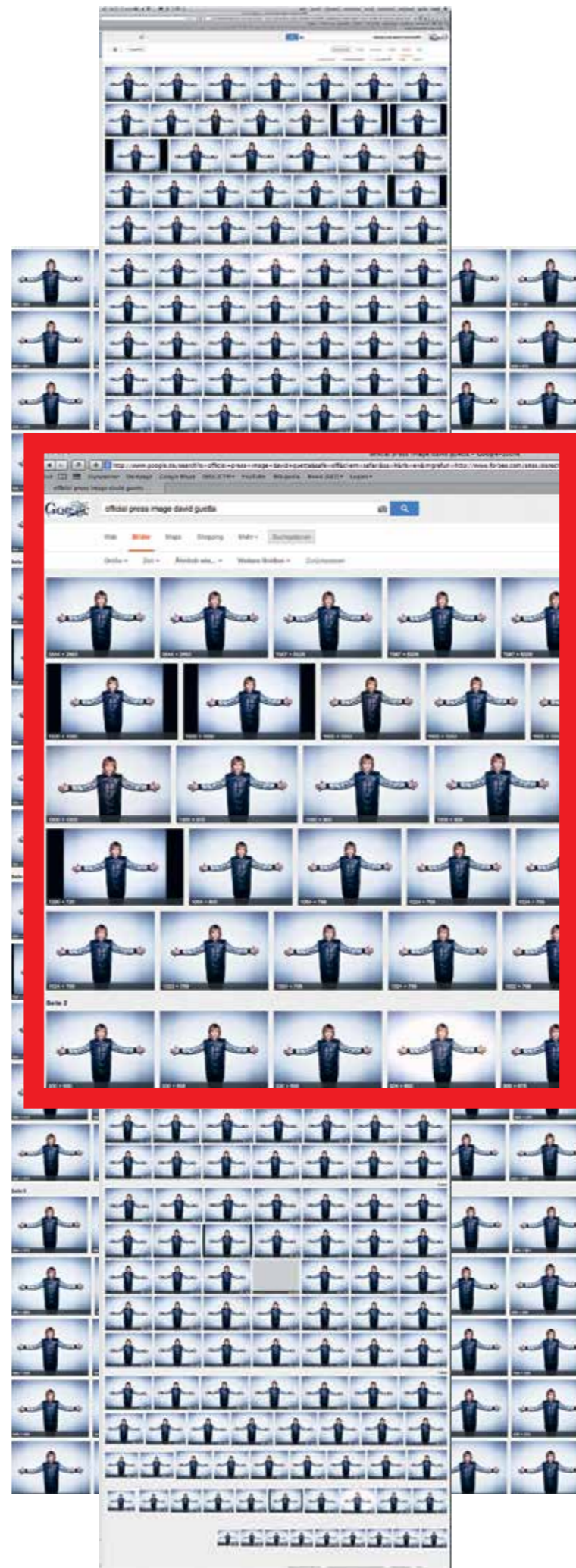
blend of music recordings. In multiplying the possibilities to create the third record, the authenticity of DJs is at once doubted, yet their creative aura seems enhanced. New musical material is spiced up with, for example, samples or quotes from the »classics« to create sense of a historical continuity to legitimize and sell one's DJ pedigree to the crowd.

With the disappearance of the materiality of visible and tangible vinyl records, how do we know what the DJ does? Nowadays we are less likely to see black discs being physically selected and the needle metaphysically dropped into the groove, magically bringing dead matter alive. In the journal *Dancecult*, Bernardo A. Attias and Tobias van Veen discussed throughout 2011-12 how the creative activities of the DJ are demonstrated through skillful manipulation of interface controls. However, we'll have to trust that the various interfaces that are used by the digital DJ are indeed steering the live performance in an improvised manner.

Such trust in the DJ's creative improvisational skills is often based on the crowd's musical engagement with the DJ. Although the activities of the digital DJ may be mysteriously invisible, they are indeed audible. Dancers engage kinetically with the sound of the selected music, improvising their part of the music-making process on the dancefloor. As Pedro P. Ferreira argued in relation to digital DJ performance technologies in 2008 in *Leonardo Music Journal*, the actor network tightens into a closed circuit that grips an ensemble of DJ, crowd, and music into a single energetic flow.

In the context of live music sequencing and sonic manipulation, we should not be surprised to see the increasing success of studio producers who perform as DJs. Although many dance music producers may have started their musical development as DJs, whether Henrik Schwarz or Kerri Chandler, something seems to have shifted in the creative relationship. Where previously the DJ entered the music studio to create a remix, studio-based producers and composers, including the financially successful Calvin Harris (Adam R. Wiles), have entered the world of DJing to embody their own production work, blended with the music that inspires and emphasizes this, on stage. This not only markets their compositions, but also supplements their potential copyright income.

Large crowds, hundreds and even over several thousand strong, tend to dance less with each other than those on the intimate floors of clubs and dance parties. Pleasure is gained from watching the DJ on stage and from singing along with the crowd to known recordings, while audiences often mediate the spectacle via mobile phones onto social networks. These are the occasions when the music producer presents their studio-generated mixes to crowds and when trust in DJ skills may be based



as much on their skills in music manipulation as on their reputation as a logo-trading brand.

Where crowds become stadium-sized, the improvisatory element of music programming, selection, and narrative structure can become an impossible challenge, making tight advance preparation a priority. Some of the high-end DJ shows may be entirely rehearsed and, possibly, even pre-recorded, although no DJ would admit to the latter. Most large popular shows seem carefully pre-programmed, requiring significant creative and logistical management to coordinate the interaction between the sound and light show, which can include live camera work and bespoke VJ-produced material, which may be comparable to a stadium rock show. The newly successful performers may nevertheless be accused of cheating or »faking«, as occurred when fans thought EDM DJ David Guetta was »miming« his music performance at the Tomorrowland Festival in 2012. Even where this is no longer the case, DJs are expected to act as »risk-takers« who provide momentary authentic links between dancers and music through the curatorial exploitation of their record collection.

Of course, music scenes can vary in what audiences expect from their DJs, not only in terms of performative skill sets, but also in terms of music selection or programming. One can see a balancing act between the need for nostalgia and for innovation. Recorded music enables time travel to the past, which is particularly embraced by older generations wishing to relive their youth for one night, as can be illustrated by 1970s and 1980s-themed dance nights, or indeed, the Northern Soul and tango dance scenes. Sound recordings also enable travel across geographical locations, enabling migrants to stay in touch with their home lands, as can be illustrated in the case of reggae within the Jamaican population in the UK or salsa amongst Cubans and Puerto Ricans in the US, which next blend into new forms of dance music. Finally, some studio-generated forms of electronic dance music may help dancers to make sense of their relationship with their mediated computer-dominated life experience, enabling a certain amnesia to herald a sonic here-and-now, and even a (perhaps nostalgic) futurist vision, embodied in dance genres such as glitch, future soul, future jazz, neuro trance, dubstep, or the pop-a-delicious overdrive of EDM.

As a curator, the DJ may have started out as a discerning consumer, a selective gateway between industry output and dancing consumers. In this leadership role, as also Richard Middleton argues in *Radical Musicology*, DJs may have gained god-like status as they bring to life the memorabilia – those still-dead objects of nostalgia – in the mix, raiding their archives for sound bites and textures. The DJ-curator established their aura as authentic performer through improvisatory engagement with their dancers.

As a creator, the DJ became active in the studio, first to create (re)mixes that suit their sets. Such remixes have, in some cases, expanded into highly prepared sets. In particular, spontaneous engagement may be lost during DJ mega-gigs, which lend themselves well to the delivery of studio-prepared soundscapes, as the crowd is too large to engage in improvised music programming. And, although even here there is still space for the spontaneous party DJ, as DJ Tiësto (Michiel Verwest) passionately claims, this is especially a place where stadium-filling studio producers seem to have successfully slipped into the performative role of the DJ, representing and embodying their trademarked sound while bathed in spectacular light between stacks of speakers.

In short, in the age of digital performative music technologies, the roles of producing, creative DJ and DJing producer blur, morphing the DJ from invisible entertainer to stage performer; from music blender to music maker; from archivist to creator; and from spiritual leader to logo-bearing copyright earner. Through these shifts, dance musical histories are continued and disrupted in generational waves of nostalgia, amnesia, and (re)discovery. The afterglow of the image of the DJ and a nostalgic popular music culture that authenticates this role can be further evidenced in various DJ apps on smart phones, enabling the user to cannibalize the recorded past and create music for the present in the miniaturized networked here-and-now of the present.

Yet, in the unsettling blend and fissure between the studio producer and the staged DJ, current digital music performance technology plays an important role. For this reason, our understanding of the role of the DJ needs to be broadened to that of a contemporary electronic music performer, who may work with samples from archived recordings and who will most likely treat these electronically to produce new sonic cultural forms, whether it be underground aural art or populist mass entertainment. Perhaps, then, we can understand the DJ as a kind of a Time Lord of *counter-memory*, not only playing with the temporality of the musical rhythm and the narrative structure of a musical journey, but also enabling audiences to surf multiple perceptions of historical time.

[Hillegonda C Rietveld](#) is Reader in Music and Sonic Media at London South Bank University in the UK. With Bernardo A Attias and Anna Gavanias, she is co-editor of *DJ Cultures in the Mix*, a collection of research essays regarding power, technology, and social change in electronic dance music, published by Bloomsbury.

*1) David Toop, *Rap Attack: African Jive to New York Hip Hop*, Pluto Press, London, 1984, page 14.

SONIC CYBERFEMINISM AND ITS DISCONTENTS

BY ANNIE GOH

In her text, Annie Goh takes gender inequalities in electronic music as her starting point to survey the hidden, and less-hidden prejudices which dominate the discourse that surrounds it. With a historical look at cyberfeminism, as well as referencing recent work on women in sound and electronic music, she examines the complexities of a debate situated between theory and practice.

In music theory, a »feminine ending« is defined as the conclusion of a melodic phrase on a weak beat, the weak part of a beat, or the weak part of a bar. The *cadence féminine* or *weibliche Endung* has been a common musicological term since its inception in the mid-eighteenth century by German music theorist Hans Christian Koch. While it is still often taught in schools as such today, feminist musicology has taken issue with the equation of »femininity« with »weakness«, »imperfection«, and »lack«, and the term has become increasingly unfashionable in recent decades.

Susan McClary's dissection and reappropriation of the term »feminine ending« in her musicological writings highlight the inherent sexism of (Western) musical discourse and practices. Fear of being politically incorrect has led to a gradual waning of the term, but the historical conditions which led to its creation and perpetuation have of course not so easily faded-out. The removal or erasure of offensive terminology plays a small part in countering real existing inequalities, be they racial, gendered, or with reference to other marginalized groups, and clearly this is not the whole battle.

The issue of women in music, more specifically women in electronic music, has been hotly debated recently, as the statistics released by female:pressure in 2013 show shamefully how festivals and labels predominantly in the so-called developed world represent only a meagre average of 8.2% female artists (women-only acts, with a further 7.3% mixed acts, not including »women festivals«). Last year's CTM 2013 Festival itself clocks in with a paltry 9.9% of female artists (and a total 15.5% of women-only, mixed, and transgender acts).

These are certainly numbers to chew on, with fairly wide-reaching media coverage and many newspapers and blogs covering these statistics, as well as women-led festivals such as last year's Perspectives Festival in Berlin making tracks in countering this massive discrepancy in female representation in experimental and electronic music. Curators and club and label owners are also forced to confront the biases in their own practices. Arguments of there not being enough female options slowly lose ground, and the common excuse of female options not being »of a high enough quality« or fitting in the programme reveal deeper-seated structural prejudices in music cultures and the wider music industry.

Between patchbay nuns and techno queens

Aside from this strong critique on the grounds of female underrepresentation in electronic music, backed by the necessary numbers, the other notable area concerning women in electronic music has been the resurrection of forgotten or neglected female pioneers. Thankfully we can now name several; Daphne Oram, Elaine Radigue, Delia Derbyshire, Pauline Oliveros, Maryanne Amacher, Laurie Spiegel, Ellen Fullmann, as well as not as often-mentioned Else Marie Pade, Maddalena Fagandini, Hildegard Westerkamp, Susanne Ciani, and Ivana Stefanovi, to name only a fraction. The work of the UK-based HerNoise project, which celebrated its tenth anniversary in 2012, has done much to contribute to this change in attitudes. Lina Dzuverovic, one of Her Noise's co-founders, humorously reflected upon the difficulties of finding hosts in the sixty-four venues they approached at the time: »the terms »feminism« and »sound« were both so unpopular that the combination of the two was lethal«. This was over ten years ago and gladly the situation has at least somewhat improved for both of these previously undesired subject areas since.

Yet amidst this laudable enthusiasm for women pioneers, an article by Abi Bliss in *The Wire Magazine* in April 2013 describes a problem lurking here too; putting these composers and inventors on pedestals runs the risk of creating myths of what she jokingly yet aptly refers to as »patchbay nuns«, nurturing a fetishization of the black and white photos of women standing in front of vintage synthesizers and handling these typically male-dominated electronic machines. This now-familiar narrative, whilst commendably creating positive female role models, is problematic in a different way; it relegates women into performing certain roles and raises them as curious exceptions within the dominant narrative of history. Anecdotes by women DJs and musicians, ranging from amusingly pathetic to morally repulsive, testify to the worrying perpetuation of similar opinions in many supposedly »forward-thinking« fields.

As Judith Butler argues it, the task of gender studies is essentially two-fold; it is not only to enquire how the category of »women« might for example become more fully represented, but also to understand and critique the very categories and structures of power in which gender discourses operate. Whilst the former is tackled by feminist activism, such as the work of networks like female:pressure and the arduous campaign towards equal representation, the latter seems lost in the murky depths of theory, leaving more fundamental questioning open to criticisms of being purely academic«, too abstract for the real world and unfettered with real material concerns. It's a complex question: how can we talk about feminism without simply assimilating the role and figure of the female into the dominant discourse? How can we discuss the category of »women« without overlooking the restrictiveness of the binary of biological sex (recently publicly exemplified by Germany's new law of a third sex).

Zeros + Ones (cyberfeminism 101 or better said 1100101)

The term »cyberfeminism« emerged simultaneously from two different ends of the world in the early 1990s. With both to some degree indebted to Donna Haraway's seminal 1985 »Cyborg Manifesto«, Australian collective VNS Matrix famously declared »the clitoris is a direct line to the matrix« in the cyberfeminist manifesto in 1991, and British-born Sadie Plant's cyberfeminist work *Zeros + Ones: Digital Women and the New Technoculture* published a few years later, almost succeeded in bringing the term into the mainstream. As Cornelia Sollfrank summarizes (see www.obn.org), just as feminism before it was not a unified movement, cyberfeminism's »100 Anti-theses of Cyberfeminism« shows how it had no claims towards complete unanimity, and how the various understandings of the term make it escape easy definition.

Reacting against the dominant view of technology as a primarily male-occupied domain, cyberfeminism activated concepts of cyberspace and the euphoric connotations that now give the »cyber-« prefix a rather dated yet perhaps endearing 1990s slant. It reinjected this excitement about cyberculture into the somewhat stale energy that the second-wave feminism of women's liberation movements of the 1970s had incurred. Second-wave feminism was criticized for its essentialising »earth-mother-nature« stance and leaving the male-dominated realm of technology precisely as that – a »man-thing«. Sadie Plant's strategy was manifold; it included an alternative historiography of digital culture through the figure of the so-called »first computer programmer« Ada Lovelace (1815-1852), a re-frequenting of the psychoanalytic signification of »1«s as male, definite, whole, a symbolic penis and »0«s as female, nothingness, »a lack«, »not-whole« or »not-one«, a symbolic vagina, as well as references to the historic and contemporary contribution of female labour in technology (from operating telephones to assembling machines in factories). In its fragmented and delineated textual style, these made compelling arguments to align women and technology much more closely than they had previously been. Cyberfeminist theorists were often also net-artists, hackers and activists using art as an outlet, putting these ideas into action and co-opting the internet to explicate continued norms and prejudices. For artists such as VNS Matrix, who smuggled their images and texts in various online and offline locations, the internet had great potential to be subversive, yet problematically, it still predominantly contributed to the objectification of women and thus replicated age-old stereotypes of femininity.

Harnessing and subverting the utopic potential of the internet can be broadly considered a core intention of cyberfeminists. The supposed neutrality of technology was under attack for repeating the dominant structures under which it was created. This can be compared to that of traditional musicology or music theories, which would also claim a similar neutrality, yet the debate around »feminine endings« acts to uncover this, at least to some extent. The continued predominance of white, male, able-bodied individuals in positions of power and the continued inequalities for everyone else, within music and technology, is met with a naïve mystification today. Yet the fact that the status quo goes unquestioned is itself the most mystifying aspect of the debate.

Working to critique and expand the notions of the feminine and the category of »women« in relation to technology was undertaken with considerable success by cyberfeminism in the 1990s. More than twenty years later however, there are still fewer women programmers by far, fewer contributing to the content of the internet (with just 8.5% of female Wikipedia editors according to a Wikimedia survey in 2011), and a large and not-much-decreasing gender gap

of women in high-tech jobs. With some incremental increases in representation, since cyberfeminism boomed, it is still difficult to be optimistic about assessing the topic of women and technology today. Recent debate surrounding the idea of a feminist programming language and subsequent hoaxing and hostility make for more worrying and fascinating insights into general views on females and feminism within technology.

Micro-feminine Sonic Warfare

Whilst the representational battle of women in electronic music is still being fought, other strategies are required to tackle the second part of the two-fold problem outlined by Judith Butler. That is, how to question the very categories in which we think and speak, the very categories which create the gendered subjects we commonly call »male« and »female«. Although the main works of cyberfeminism did not deal at any great length with sound, the purported decentralized, non-linear and non-hierarchical nature of cybernetic culture, and characterizations of sound as an ephemeral, emanating force, gives occasion to link the two as sonic cyberfeminism.

Tara Rodgers' work towards a feminist historiography of electronic music in her book *Pink Noises: Women on Electronic Music and Sound* seems to straddle both levels of the two-fold task. In interviews with women composers, musicians, DJs, and sound artists, she is on the search for individual approaches and alternative methods and practices in the male-dominated world of sound and electronic music. On a more fundamental level, a sonic cyberfeminism would delve deeper. German physicist Hermann von Helmholtz made several huge contributions to science, and his work on acoustics laid the foundations for how most analogue synthesizers were and are designed and built, and how digital sound synthesis is generally undertaken today. However Rodgers takes issue with the unquestioned authority that Helmholtz's findings have had, resulting in homogenized synthesizer design practices up until today. The idea of a god-like creator, analyzing sound waves, breaking them down into constituent sine waves, and resynthesizing these to recreate any existing sound, rings like an all-too-familiar narrative.

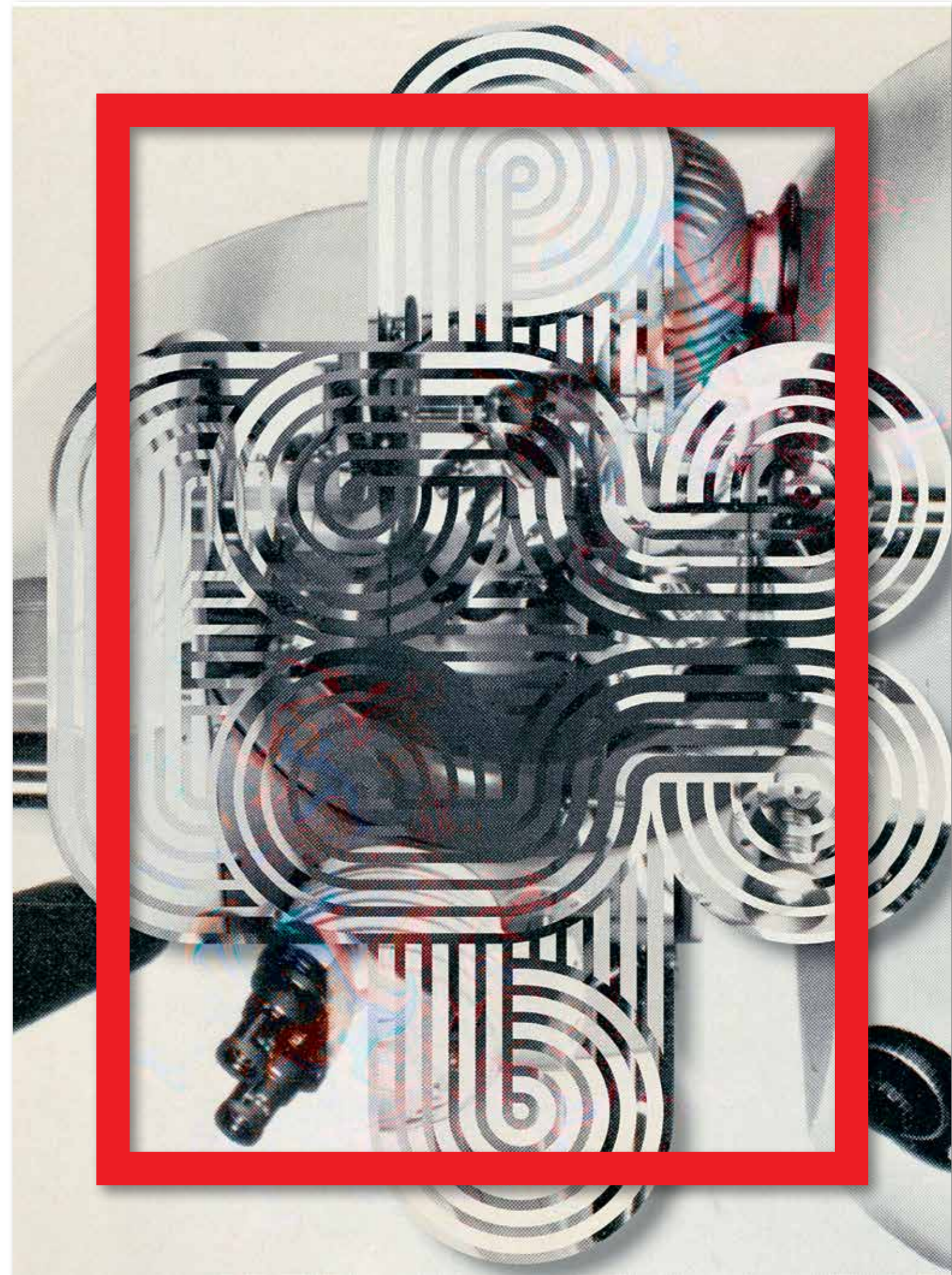
Rodgers refers to the synthesizers and instruments designed by Jessica Rylan at Flower Electronics, which actively incorporate chaotic and unpredictable systems. She could also have mentioned other synthesizer and electronic instrument designers outside of the mainstream who, although not women, have undertaken similar pursuits, for example Michel Waisvisz, Rob Hordijk, and Peter Blasser. Her focus on women is clear for obvious reasons, but there is space for a more nuanced discussion, namely as she is keen to emphasize that the perpetuation of dominant cultural practices can be enacted by individuals of any gender; being female doesn't necessarily make you a feminist, just as being male doesn't necessarily make you a male chauvinist.

If Sadie Plant's analysis down to the level of the »0«s and »1«s of binary code did not go far enough to deconstruct the binary of »male« and »female«, or its multiple and rhizomatic style made its intention too diffuse, a further approach, which has been developed since cyberfeminism boomed in the 1990s, can be considered. Luciana Parisi's *Abstract Sex* challenges fundamental assumptions in biology and evolutionary theory and tackles what is often taken to be the unassailable truth claims of Darwinism and neo-Darwinism, with the alternative evolutionary theories of Lynn Margulis and Elaine Morgan. The very ideas of »survival of the fittest«, competitiveness, and genetic superiority, which pervade modern conceptions of evolution, must also be seen within the social contexts under which they arose and prospered. Opening up a third way beyond the constrictions of binary modes of thought, and zooming in on bacterial sex and its corresponding bio-technological developments (e.g. in genetic engineering), she offers another alternative view on what could be called cyberfeminism, though she herself does not use the term.

Micro-feminine warfare, for Parisi, grants a potential third way out of the problematic binary given to us in the simple categories of »male« and »female«, and the dominant debate which characterizes the feminine as passive and disordered (nature), and the masculine as active and ordered (culture and technology). Fusing this with the concept »Sonic Warfare« surveyed by Steve Goodman in his book of the same name, shows not only how sound can be used as a weapon in a literal sense but also on the much less tangible level of vibrational force, of bodies affecting and being affected by other bodies. One of the three definitions of »unsound«, as sounds not-yet-heard, provides the realm of potentiality linking the »cyber« of cybernetics, cyberfeminism, and a sonic cyberfeminism.

The cyberfeminist utopia which suggested a complete assimilation of the body into technology, can also however be read as risking the disappearance of »woman« into the machine. As Parisi puts it in reference to cybersex and bio(digital)technologies, we are in danger of witnessing »the ultimate dream of disembodiment« as the triumph of the patriarchal order. A new conception of feminine desire is needed, one that goes beyond stereotypical ideas of femininity. In a theory towards an ontology of vibrational force, Goodman states, »if we subtract the level of human perception, everything moves«. It is less a question of what micro-feminine sonic warfare might sound like, and more a question of what it moves.

Annie Goh is an artist, researcher, and frequent contributor to CTM Festival. For the 2014 edition, she curated the panel »Sound, Gender, Technology - Where to with cyberfeminism?« with guests Sadie Plant, Fender Schrade, Susanne Kirchmayr, and Marie Thompson.



101 WOMEN IN ELECTRONIC MUSIC

BY ANTYE GREIE-RIPATTI

Following recent debates on the meagre proportion of women in technology and music - at least in the public sphere, e.g. festivals, publications, or institutions - we asked musician and author Antye Greie-Ripatti for further reflection on the yet-to-be-written her-story of women in electronic music. Over the past few years, the investigation on the history of female pioneers and activists has finally begun. It is underlined by Greie-Ripatti through a personal collection of 101 names of influential female artists, showcasing the rich potential and abundance of women in the field of electronic music. Such a list is of course infinite and is imperfect by nature, as it can never be completed. The compilation's fragmentary approach indicates the need for further work and research, especially beyond the Western sphere. No doubt we must look further, and hopefully this list of forward-looking women may serve as an impetus in this direction. For us and for everyone else.

Recently I taught 13-year-olds a lesson about electronic music - from Theremin to Skrillex via Eliane Radigue, Peaches, and Grimes. When CTM commissioned me to write about female pioneers in electronic music, I had only one wish: to find as many as possible. In the last years, to my great relief, the history of female pioneers has begun to be explored. My own contribution is just a beginning; the task is worthy of doctoral research. I hope this list will be filled over time with the names of more innovators, potentially from continents and corners of the world to which I have little access. Electronic music has traveled from the academic context of its emergence to clubs, from private homes to performances in public spaces. Here are some women who have pushed electronic music forward; dig deeper!

TIMELINE (SORTED BY DATE OF BIRTH)

BEFORE 1900

[Johanna Magdalena Beyer](#)

1888-1944, DE/US: First recognized electronic piece of music ever. Listening tip: Johanna M. Beyer *Music Of The Spheres* (1938).

1910s

[Clara Rockmore](#)

1911-98, US: Virtuoso performer of the Theremin, the first electronic music instrument; collaborated with Prof. Leon Theremin to refine the instrument.

1920s

[Else Marie Pade](#)

*1924, DK: Produced musique concrète and slow, elegant, dissonant electronic music that only existed on tapes.

[Charlotte »Bebe« Barron](#)

1925-2008, US: Together with her partner created the first electronic film score to *Forbidden Planet* (1956).

[Daphne Oram](#)

1925-2003, UK: The unsung pioneer of techno. Built her own studio for experimenting with electronic music in the 1940s. Invented the Oramics drawing-sound system. Co-founder of the BBC Radiophonic Workshop.

[Ruth White](#)

*1925, US: Electronic music pioneer using the Moog synthesizer. Composer of *Flowers of Evil* (1969), and *Short Circuits* (1970).

[Maddalena Fagandini](#)

1929-2012, UK: Electronic musician and television producer. Co-creator of proto-techno single, »Time Beat/Waltz In Space« (1962). Member of the BBC Radiophonic Workshop.

1930s

[Eliane Radigue](#)

*1932, France: Minimal drone composer, musique concrète, synthesizer, used the ARP 2500 modular system and tape, has been creating compositions for acoustic instruments since 2001, extreme minimal music, very influential up and into the 21st century.

[Pauline Oliveros](#)

*1932, US: Influential composer, central figure in the development of post-war electronic art music. Wrote new music theory on concept of »Deep Listening« and sonic awareness.

[Yoko Ono](#)

*1933, JP: Fluxus performance artist. Included electronic and sound art in her early »happening« experiments.

[Delia Derbyshire](#)

1937-2001, UK: Style: musique concrète. Joined the BBC Radiophonic Workshop. Created the first complete electronic music score for TV.

[Anne Lockwood](#)

*1937, NZ/US: Created field recordings. Fluxus artist. Electronic music teacher at Vassar College.

[Maryanne Amacher](#)

1938-2009, US: Composer, performer and installation artist. Investigated physiological and psychoacoustic phenomena, such as »otoacoustic emission«, in which the ears themselves act as sound-generating devices. Worked extensively with site-specific spatialisation of sound. Influential teacher.

[Wendy Carlos](#)

*1939, US: Interpreted classical works and film scores on Moog synthesizer, notably *The Shining* and *Tron*.

1940s

[Annette Peacock](#)

*1941, US: Recorded experimental electronic rap in 1970s, *I'm the One* (1972). One of the first artists to feed voice into a synthesizer.

[Pril Smiley](#)

*1943, US: Played a significant role in the development of the Columbia-Princeton Electronic Music Center and its programme. Her first electronic piece, »Eclipse« (1967), won first prize at the International Electroacoustic Music Competition.

[Michèle Bokanowski](#)

*1943, France: Composer of computer music for film and dance with stunning sound quality. Listening tip: *Tabou* (1983-1984).

[Alice Shields](#)

*1943, US: Technical director of CPEMC. Composer of complex electronic vocal works, including the important »Study for Voice and Tape« (1968).

[Laurie Spiegel](#)

*1945, US: One of the first to experiment with computers & algorithmic composition.

[Maggi Payne](#)

*1945, US: Composer, flutist, video artist, recording engineer/editor, and historical remastering engineer who creates electroacoustic, instrumental, and vocal works. Currently Co-Director of the Center for Contemporary Music at Mills College (Oakland, CA). Teaches recording engineering, composition, and electronic music.

[Suzanne Ciani](#)

*1946, IT/US: Made sound effects for *Star Wars*. Studied computer-generated music at Stanford University's Artificial Intelligence Labs in the early 1970s.

[Hildegard Westerkamp](#)

*1946, DE/CA: Composer, radio artist, and sound ecologist, gives soundscape workshops and lectures internationally, performs and writes.

Laurie Anderson

*1947, US: Composer, performance artist, tape-bow violin with magnetic tape instead of horse hair, MIDI, etc. She developed a talking stick, a six-foot-long baton-like MIDI controller that can access and replicate sounds, and is the first artist to have an artist-in-residence at NASA.

Christina Kubisch

*1948, DE: Sound artist, »Electrical Walks« series of works, studies electromagnetic radiation which turns into electronic sound walks, and also developed new headphones for the purpose.

1950s**Christine Newby (Cosey Fanni Tutti, Cosmosis)**

*1951, UK: Industrial music, roots in performance art, co-founder of avant-garde groups Coum Transmissions, Throbbing Gristle and Chris & Cosey. Listening tip: *Selflessness* (2004).

Ikue Mori

*1953, JP: Drummer, digital composer, visual artist, drum machines, digital percussion, experimentation with musical form.

Carla Scaletti

*1956, US: Harpist, composer, and music technologist.

Zeena Parkins

*1956, US: Besides standard and electric harps, her work also incorporates Foley, field recordings, analogue synthesizers, samplers, oscillators, and homemade instruments.

Pamela Z

*1956, US: Processes her voice in real-time to create dense, complex sonic layers in her solo works that combine experimental extended vocal techniques, operatic bel canto, found objects, text, and sampled concrète sounds. Uses software along with custom MIDI controllers to manipulate sound and image with physical gestures.

Laetitia Sonami

*1957, FR/US: Composer, performer, sound installation artist. Designs and uses her own instruments along with wearable technology for her compositions and sonic story telling.

Elisabeth Schimana

*1958., AT: Composer, performer, and radio artist practicing and researching musicology, ethnology, space-body electronics, gender, art, and technology.

Cio Dorbandt (Cio D'Or)

*1958, DE: Cologne-based DJ and producer, ranges from warm techno-derived to ambient productions.

France Jobin (i8u)

*1958, FR/CA: Minimal digital music composer, audio art, today uses various analogue and digital technologies, releases on the label LINE.

Miya Masaoka

*1958, US: Electroacoustic works for koto and electronics, field recordings, laptop, video and written scores for ensembles, chamber orchestras, and mixed choirs.

1960s**Gudrun Gut**

*1960, DE: Founding member of Einstürzende Neubauten, and Malarial. Founded the label Monika Enterprise, first solo record 2006, techno songwriter.

Kaffe Matthews

*1961, UK: Influential sound artist and digital music composer, multi-channel composition, founded »Music for Bodies« and builds sonic furniture.

Ana-Maria Avram

*1961, RO: Spectral music style, acoustic, heterophonic and transformational. Electronic music and computer assisted music. Works closely with composer Iancu Dumitrescu.

Valerie Olukemi A »Kemi« Olusanya (Kemistry)

1963-99, UK: Pioneering drum'n'bass artist as part of the DJ duo Kemistry & Storm, co-founded the Metalheadz label.

Jane Conneely (DJ Storm)

UK: Highly regarded as the first lady of drum'n'bass, co-founded Metalheadz back in the early 1990s, involved with all female DJ/MC-collective Feline.

Saskia Slegers (Miss Djax)

*1962, NL: Techno and acid DJ, founder of Djax Records.

Susanne Kirchmayr (Electric Indigo)

*1965, AT: DJ, composer, musician, spatial-temporal placement of subtly textured sounds, founded the international collective female:pressure.

Riz Maslen (Neotropic)

*1965, UK: Keyboardist, built a home studio in the early 1990s, collaborated with 4hero and Future Sound of London.

Tone Åse

*1965, NO: Works with both electronic sound processing and acoustic sound on voice.

Barbara Hallama (Barberdy)

*1965, DE: DJ in Munich, took part in 1990s garage parties, today is a cultural initiator for Berlin's »Support Your Local Ghetto« events, publishes mixes extensively on SoundCloud.

Björk Guðmundsdóttir (Björk)

*1965, IS: Electronic music producer and songwriter, connected UK club sound with elaborate song writing and innovative production. Influential record: *Debut* (1993).

Bev Stanton (Arthur Loves Plastic, ALP)

*1966, BS: Downtempo electronica, queer culture.

Vicky Bennett (People Like Us)

*1967, UK: Music and sound collagist, radio maker, multimedia artist, sound films, currently runs the show »DO or DIY« on WFMU radio.

Keiko Uenishi (o.blaat)

JP/US: Known for her works that formed through experiments in restructuring and analyzing one's relationship with sounds in sociological, cultural, and/or psychological environments.

Ellen Fratz (Ellen Allien)

*1968, DE: Berlin techno DJ with her own label and network, Bpitch Control.

Merrill Beth Nisker (Peaches)

*1968, CA: Beat and song writer, pioneering beats, sexuality, otherness, video artist, influential record: *The Teaches Of Peaches* (2000).

Andrea Polli

*1968, US: Digital media artist, addresses issues related to science and technology in contemporary society.

Terre Thaemlitz

*1968, JP/US: Critically combines themes of identity politics - including gender, sexuality, class, linguistics, ethnicity and race - with an ongoing critique of socio-economics, styles include electroacoustic computer music, club-oriented deep house, and more.

Marina Rosenfeld

*1968, US: Sound and visual artist, influential turntable-as-instrument work.

Iris Garrelfs

*1969, DE/UK: Composer and performer of raw voice into machine noises, curator of the London-based SPRAWL series.

Beth Coleman (DJ Singe)

*1969, US: Co-founder and in-house DJ of SoundLab, an innovative turntablism arts group dedicated to creating location-specific performances of sound and visual art, master stylist of illbient genre.

1970s**Sachiko Matsubara (Sachiko M)**

*1970, JP: Minimal electronic composition, seminal work *Sine Wave Solo* (1999).

Barbara Morgenstern

*1971, DE: Beat-blasting electronic music and songwriter, first wave bedroom producer movement in Berlin.

Rekha Malhotra (DJ Rekha)

*1971, UK/US: Almost solely responsible for putting Bhangra music on the western plate-os-phere, DJ, producer, curator, and activist, fuses the Indian genre of Bhangra music with international hip-hop and drum beats. Runs an infamous club night in NY, also an activist.

Bevin Kelley (Blevin Blectum)

1971, US: Electronic crazy laptop punk, multimedia composer. Partnered with Kevin Blechdom to form the duo Blectum from Blechdom.

Monika Kruse

*1971, DE: Successful techno DJ, music producer and record label owner.

Leila Arab (Leila)

*1971, IR/UK: IDM-derived personal irregular ambient, electronic pop.

Andrea Parker

*1971, UK: DJ and club music producer, sampling, remixes, bass. Listening tip: »Ballbreaker« (1998).

Jo Thomas

*1972, UK: Uses multi-speaker systems and writes for vinyl, tape cassette, and digital media. Golden Nica award in Digital Music from Prix Ars Electronica, releases on Entr'acte label.

Maja Ratkje (Solveig Kjelstrup)

*1973, NO: Composer and performer, expressive voice in digital music, electroacoustic composition, part of the noise band Fe-mail, releases on Rune Grammophone, plays theremin, laptop, and violin.

Caroline Hervé (Miss Kittin)

*1973, FR: Electroclash DJ, singer, and songwriter.

Tara Rodgers (Analog Tara)

*1973, CA: DJ and electronic musician, writing about sound and audio technologies, published the important book *Pink Noises* (2010).

Nicole Lizée

*1973, CA: Composition with unorthodox instrument combinations that include the Atari 2600 video game console, omnichords, stylophones, reel-to-reel machines, Simon and Merlin hand held games, and karaoke tapes.

Jessica Rylan (Can't)

*1974, US: Designs and builds modular analogue synthesizers, rhythm boxes, and distortion pedals, founded Flower Electronic, producing editions of her unique instruments.

Missrepresent

UK: Drum'n'bass DJ and producer, perfected the art of production, now working as part of Silent Code.

Chantal Passamonte (Mira Calix)

*1974, ZA/UK: Composer, performer, DJ and sound artist, releases on Warp Records.

Jennifer Cardini

*1974, FR: DJ and producer living in Cologne, Germany.

Esther Venrooy

*1974, NL: Audio art, employing electronic and digital techniques in compositions, works at the IPEM (Institute for Psycho-Acoustics and Electronic Music).

Johanna Fateman (Le Tigre, Swim With the Dolphins)

*1974, US: Keyboards and samples, made a five-song cassette entitled *The Struggle for the Full Exercise of Woman's Equality* (1999).

Alexandra Dröner & Johanna Grabsch (Sick Girls)

DE: DJ-team for grime, dubstep, UK underground, gangsta rap, B-more and digi-dancehall. Run the party series »Revolution N°5« - a sound concept with no limits.

Hild Sofie Tafjord

*1974, NO: Electroacoustic noise music, experimental electronics, also part of Spunk and noise duo Fe-mail.

Yōko Higashi (hamaYōko)

*1974, JP/FR: Fearless electronic music production and composition, unique, acousmatic, anarchistic, pitch-transposed atonal chanting, samples, distortions, and paroxysmal rhythms.

Heidi Mortenson

*1975, DK: Electronic song writer, singer, and producer, skilled energetic live performer, entertainer, advanced live sample beatbox-to-beat techniques, live processing, employs wide range of outboard effects, mixing, and loop techniques.

Mathangi »Maya« Arulpragasam (M.I.A.)

*1975, UK/SL: multimedia artist, pioneering »rest-of-the-world« view approach in off-club music, off-rapper.

Magdalena Chojnacka (Magda)

*1975, PL/US: Minimal techno DJ/producer, close to Ritchie Hawtin's Minus label.

Sara (That Fucking Sara)

*1975, DK: Early turntablist, enriched nightlife with hip hop, disco, electro, grime, jazz, soul, Italo disco in Copenhagen and Berlin.

Manuela Barile

IT/PT: Works in the rural region of the mountain range of Gralheira (S. Pedro do Sul Municipality), focuses on place-based projects and on social sound / sound in community.

Tujiko Noriko

*1976, JP: Unique electronica songwriter and filmmaker, releases on Editions Mego, favourite gear: MPC 2000.

Ryoko Akama

*1976, JP/UK: Composer, digital music to electroacoustic, ecology of sound, develops personal instruments, involves a Geiger counter in her work.

Ami Yoshida

*1976, JP: Extreme variety of vocalization, electroacoustic performance.

Chloé Thévenin (DJ Chloe)

*1976, FR: DJ, artist, and composer aiming to make the dance floor more beautiful, softer, more intelligent, more open.

Gina V. D'Orio

*1976, DE: Main former vocalist from German Digital Hardcore band EC8OR and member of Cobra Killer, distorted electronic hard core production.

Alexandra Cardenas

*1976, CO: Live coder, has a passion for code and her electric guitar and supercollider, involved in the live coding scene in Mexico City.

Jam Rostron (Planningtorock)

UK: Queer synth-pop electronica songwriting, expanding gender perception.

Jocelyn Samson (JD Samson)

*1978, US: Producer, songwriter, and DJ best known as member of the bands Le Tigre and the MEN, also part of electro-activists Ultra-Disco that support the Occupy movement.

Kristin Erickson (Kevin Blechdom)

*1978, US: Experimental electronic musician/performance artist low-fi, pop distortion, noise, comedy-laptop anarchy. Part of the duo Blectum from Blechdom.

Natalie Beridze (TBA)

*1979, GE: Innovative self-producing electronic musician, unique crossover of techno, indie, classical influences, film scores, writes all her music in FL Studio.

Laura Escudé

*1979, US: Violinist, music producer, composer, controller-ist, music technologist, and Ableton Certified Trainer, designed and played shows for Jay-Z and Kanye West.

Merja Kokkonen (Islaja)

*1979, FI: Her music is notably psychedelic and very intimate using a large variety of instruments.

1980s & ALREADY PIONEERS

Sara Abdel-Hamid (Ikonika)

*1980, UK: Electronic musician, producer, DJ, garage and house, dubstep, releases on Hyperdub label.

Maria Chavez

*1980, PE: Sound artist, abstract turntablist, curator, and DJ based in NYC, uses broken vinyl.

Helena Gough

*1980, UK: Powerful expressive musique concrète for the 21st century. Listening tip: *Mikroklimate* (Entr'acte, 2010).

Kateryna Zavaloka

*1981, UA: Electronic producer, performer, and sound artist, crisp IDM-influenced production, unique colour, interweaves sampling of Ukrainian folk elements using instruments from Waldorf, Dave Smith, and Native Instruments.

Hildur Ingvaldardóttir Guðnadóttir (Hildurness)

*1982, IS: Use of electronically treated cello sounds for drone and noise music.

Merrisa Campbell (Cooly G)

*1982, UK: Producer, DJ and remix artist, dub organizer, genre-defying, bass-influenced R&B-laced tracks, releases on Hyperdub label.

Rosa Menkman

*1983, NL: Artist and theorist who focuses on accidents in both analogue and digital media called glitches, compressions, feedback and other forms of noise.

Asma Maroof (DJ Asma, one half of Nguzunguzu)

Tour DJ for M.I.A., mixed the Vicki Leek mixtape, style: futuristic global bass, classically hybrid club music, bass music, tropical/global bass, trap, seapunk, moombahton, and other Internet-spawned genres.

Maya Jane Coles

*1987, UK: Music producer, audio engineer and DJ, also part of electronic dub duo She Is Danger, with Lena Cullen.

Vicky Wickenden (Lady V Dubz)

UK: London drum'n'bass. Founding member of the «Feminine Takeover» movement alongside MC Lady Blazer.

Claire Boucher (Grimes)

*1988, CA: Beat and songwriter, instruments are keyboards and synthesizers, uses looping and layering techniques, particularly with vocals; many of her songs feature layers of over fifty different vocal tracks which create an «ethereal» sound, just signed to Jay-Z's label.

BONUS: NEW ARTISTS TO WATCH-OUT FOR

Lina Bautista

CO: Live composition built-up with amplified sounds from the environment, the voice, and the generation of algorithms for processing and location in space.

Kate Simko

US/UK: Minimal house producer, composer.

Tinker

US: melodic take on instrumental hip-hop and beat-driven bass music.

Laurel Halo

US: Electronic musician written techno, ambient, and synth-pop, using synthesizers, drum machines, and samplers, as well as voice, piano, electric guitar, and violin.

Holly Herndon

US: Digital music, laptop- and software-based production and performance.

Christina Ryat (RYAT)

US: Producer, composer, multi-instrumentalist, vocalist, and sound manipulator on live electronics, instruments, pedals, and software, signed to the Brainfeeder label.

Jessy Lanza

UK: Electronic RnB-influenced club music with haunting vocals.

Pharmakon

US: power electronics/death industrial music, noise.

Christine Clements (Vaccine)

US: Dubstep producer, releases on labels Hotflush and Nonplus.

Emajolly (Emika)

UK/CZ: Composer and sound designer, uses Native Instruments, new, dark, downtempo dubstep, releases on Ninja Tune label.

Kyoka

JP: Heavy rough sound resulting in a broken pop-beat with experimental yet danceable rhythms, started with tape recorder as her toy by cutting and editing, later began to use synthesizers and computers, released her debut on raster-noton in 2012.

Kito & Reija Lee

AU: Producer duo for dubstep-pop tunes.

Sarah Farina

DE: Berlin's digital DJ of grime, dubstep and footwork.

Nina Kraviz

RU: minimal techno DJ and producer.

Jennifer Lee (Tokimonsta)

US: DJ and producer, uses live instruments, percussion, digital manipulation, and dusty vinyl.

Ferhiwot Tadesse (DJ Lee)

*1988, ET: DJ and radio-producer in Ethiopia.

Antye Greie-Ripatti (*1969, East Germany) is a vocalist and songwriter, producer, performer, poet, and calligrapher, currently living in Hailuoto, Finland. She produces and performs under her own name and as AGF, and has released on labels such as Orthlong Musork, Asphodel, Nexsound, and her own AGF Produktion, as well as on Kitty-Yo as half of the the electro-avant-garde-pop duo Laub.

The author wishes to thank the Female:Pressure network!



TRANSMISSIONS

BEAINI // COHEN: A CASE STUDY

BY KATERINA LEINHART

Rabih Beaini's Morphine Records explores a liminal space between club culture and the avant-garde, in which techno is unmoored by insurgent noise. The label is among three highlighted at this year's CTM Festival, along with PAN and Editions Mego, for their exploratory approaches to genre and sound itself. Recent years have also seen such labels looking backwards in time to source forward-thinking sound, presenting musical vanguards from past generations alongside contemporary young experimentalists. It is from this moment of historical disjuncture that CTM 2014 - Dis Continuity - takes its inspiration, as demonstrated by the presentation of Beaini's most recent project for Morphine. In 2013, the label released a retrospective trilogy of works by synthesizer improviser Charles Cohen, whose work has remained largely unknown outside his immediate artistic community despite over four decades making music. For CTM Festival's 15th anniversary edition, Beaini and Cohen perform in the joint programme, »Un Control«.



Charles Cohen



Rabih Beaini

Beaini grew up on Lebanon's Mediterranean coast during a period of civil war. Without formal disciplinary structures at home or in school, he says he oriented himself through direct experience in the context of a sometimes volatile »survival environment«. These years spent developing critical awareness and adaptability constituted his earliest exercises in improvisation. He didn't join up with the militias, nor align with the traffickers around Beirut's harbours. »My dad at this time did not say, don't go with these people. He never told me this. I just did not do it by myself. And my friends at that time knew not to bring me inside their businesses. They never even tried, not even once, to involve me in anything, not even carrying, or holding a gun in my hand... And that was not fear, but I knew there was something wrong in the political system. I couldn't take any decision or be on a side with someone else's ideals, because those ideals were often changing.«

As a DJ and producer, Beaini negotiates de-territorialized, mutable soundworlds largely created through improvisation and recorded in one-take sessions. He began his career in music DJing first in Lebanon, then Italy after leaving architecture school. Recognized for his raw, industrial-influenced techno, his sound integrates redemptive, freewheeling strands of Lebanese folk songs and classical Indian ragas, free, spiritual, and cosmic jazz, noise and modular electronics - all brought into eruptible dialogue or dismantled and recycled for parts, their residual energy still stinging and singing through tonal or structural skeletons. »There's always a sense of melancholy, a weird dark feeling, and there's always a bright thing, a bit of hope,« he says of the resulting play with dissonance. »And these two things are always expressed in my music, often simultaneously.«

Beaini embraces atonality and opposition as parts of liberatory practice. »You start realizing how to live in it, how to, in a way, understand the code of it,« he says, likening the process to acclimating to the anarchic metropolitan rhythms of Beirut, or internalizing the abstract, exploratory logic of avant-garde electronic composers such as Stockhausen or Cage. This is pedagogical, as well as personal. »I like that people gain their own consciousness about things and know that there are other ways, and there are other worlds - not just this world that is drawn in front of us,« he explains. »There is another thing out there, and you just need to start learning how to listen.«

In his live and DJ sets as Morphosis, he pushes listeners to confront their own limitations, even rupture them. »I have to capture them into a cage and start throwing things at them,« he says. »That's the only way. Because if they are free in a field, I cannot reach them.« You have to lure listeners in, he says, speak to them in their own language, then detonate and set them free.

Beaini founded Morphine as a platform for sharing such music, which he considers an educational tool. He describes the label, known for analogue, outsider techno from the likes of Hieroglyphic Being (aka Jamal Moss aka IAMTHATIAM aka The Sun God) and Philadelphia-based experimental noise duo Metasplice, as a multiplicity of ideas without stylistic strictures governing its output. The label maintains strong allegiance to its peripheral position to the dance music industry, issuing releases without much hype and minimal artist promotion. Beaini is not aiming for a universally palatable sound; he says he actually wants to filter Morphine's audience to discourage appropriation. But the label's releases have come to critical recognition, not as products of haphazard experimentalism, but deliberate and dedicated no-bullshit free form.

»I don't want to call it pioneering, but in a way, yes, it's inspired,« Beaini says of Morphine. It doesn't subscribe to trends, because trends fall; it's not pretentious. It's just a story, a container for strong and singular voices. »I wouldn't put anything that would age out,« he says. »I would like music on the label to stay eternal, timeless in a way.«

Beaini first encountered Morphine label artists Metasplice through his interest in the American noise scene. »Their sound was a new form of sci-fi,« he recalls in a recent email interview from Lebanon. »Futuristic tones based on an improvisational structure, and incredible techniques on their gears.« Through improvised dialogue, the duo instrumentalizes discomfort with the manipulation of sonic extremes. Their sound escapes literal interpretation, but its affective, corporeal power is undeniable. »This is a very rare case of genius in my opinion,« Beaini says. »In a way, it's like going inside a bar and screaming at people. People don't understand what you're saying, but they understand that there's something going on. Some people will follow you out, and some people just stay sitting at the table. The people that go out will do the revolution with you, even if they didn't know it was a revolution going on. They were just carried by the strength of this screaming guy in whatever language.«

Kenneth_Lay (aka hair_loss) of Metasplice had been collaborating with fellow Philadelphia experimental musician Charles Cohen as Color Is Luxury, and it was he who introduced Beaini to Cohen's early recordings as Ghostwriters with Jeff Cain. Cohen has been developing his own musical discipline, notable for its stylistic continuity, for the past 40 years. He is one of the few artists to own and have mastered Donald Buchla's Music Easel, a rare portable synthesizer built from two modules of the Buchla 200 Series, from which he procures an expansive sound palette with the intuition, nuance, and careful listening of a virtuosic instrumentalist.

»The world of electronic music as it was unfolding in the early 1970s resembled an Odd Fellows picnic, emerging pell mell on the outskirts of the 60s pop explosion«, Cain writes in a reflection on Cohen published on the inner sleeve of *Music for Dance and Theatre*. »A new genre of sound was being conjured from strange looking boxes, makeshift whatnot and whirligig contraptions. An evolving landscape shaped by an unlikely continuum of practitioners - erudite and otherwise, the likes of Terry Riley and Morton Subotnick sharing audience subsets with less fluent rock and roll stalwarts. Amidst this haphazard backdrop, Charles Cohen quietly slipped in through a side entrance. Well, maybe not always so quietly. Charles' pioneering work was, and continues to be extraordinarily original and refreshing.... uniquely capable of bringing unimagined worlds to life.«

Beaini was initially struck by the drum sequences and patterns from the Buchla synth and MatrixDrums on the track »Dance of the Spirit Catchers« from Ghostwriters' *Remote Dreaming* album - then one of Cohen's few works to have been officially released. »I thought it was so revolutionary for its time,« he says. »It had no reference to anything that was yet produced until that era - '79 - and [was] still fresh nowadays.« A limited run of 12" s had been issued in 1980, and Kenneth_Lay put Beaini in touch with Cohen to discuss the possibility of a repress, which morphed into a larger project when Cohen gave Beaini access to decades worth of old reel tapes. »I hated to put out a single piece from an artist, a repress and a remix on the B-side. It sounded a bit like a »DJ friendly« work, and this is something I always try to avoid on the label,« Beaini reflects. »The overall scheme is to reach people that aren't necessarily DJs, but that would like something diversely related to dance music.«

Much about the collection resonated with Beaini - the influences of African and Indian music in Cohen's patterns, his command and creative dexterity with rare instruments. (Beaini himself works primarily with analogue gear - drum machines, synthesizers, and sequencers, plus a couple of string instruments: the *kudede*, the *santur*, a *rababa*, a Chinese harp.) Many of Cohen's tracks had been recorded not in studios, but as scores for music and theatre pieces or in live performance or improvisation sessions. Cohen's music also had the added value of introducing a historical perspective to Morphine. While Beaini's productions as Morphosis nod to vintage house and techno currently experiencing a renaissance, as well as the kraut music of pioneering German artists like Conrad Schnitzler (with whom Cohen collaborated for the split LP *C to C* in 1985, ultimately never released), or Sun Ra's revelatory astral

jazz, the label's repertoire lacked any distinct chronologic affiliation. Cohen's works, some produced 35 years prior, exemplified an early breed of electronic folk discernable in more recent dance music that still sounded resolutely contemporary. From here, the idea for a retrospective series took shape.

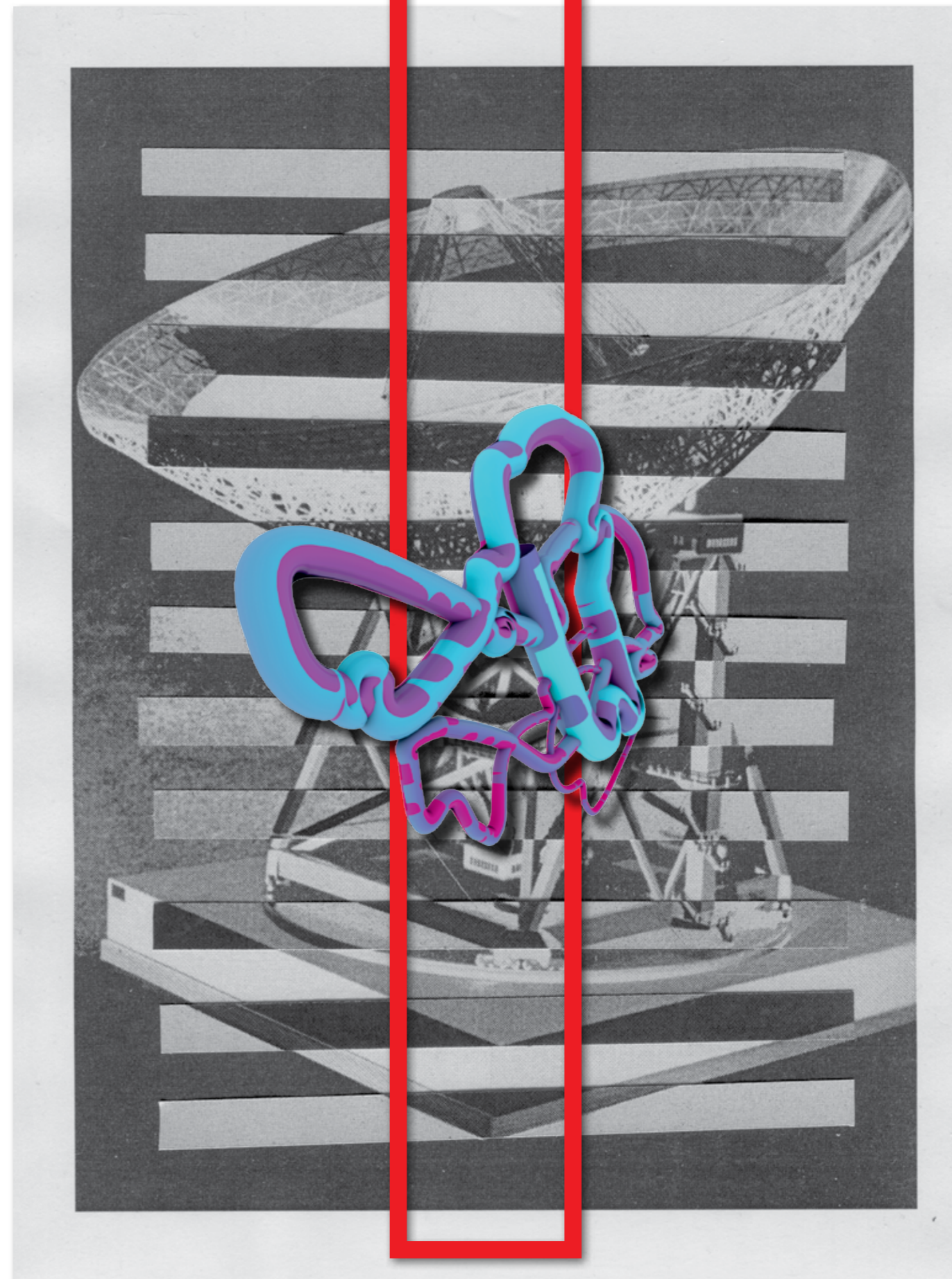
Though well established in the improvisational, avant-garde, and jazz scenes of the East Coast, Cohen has, until recently, flown under the radar. Due to a preference for process over production and improvisational practice, a relatively minor percentage of his music has ever actually been recorded. »Improv sessions are often related to the momentum of music, the birth and death of sound«, Beaini explains. »These sessions are not regularly meant to be recorded and eventually released.« Only with more recent developments in portable, affordable, and reasonably good quality sound recording equipment has the immortalization of such sessions become possible, resulting, in Beaini's words, in documents marking that momentum.

Charles Cohen: A Retrospective of Early Works, 1978-1989, a vinyl triad comprising *Music for Dance and Theatre*, *Group Motion*, and *The Middle Distance* was released in November 2013, along with a 12" of two »Dance of the Spirit Catchers« Morphosis remixes. (The first Morphine CD release of the material is forecast for the forthcoming year.) It's not clear exactly why, after so many years, Cohen has entrusted Beaini with taking care of his work, nor can Beaini fully articulate what exactly made the undertaking so important. »It was time for this to come out,« he says simply.

At CTM 2014, following two years of communication, Beaini and Cohen will meet and play together for the first time. The programme includes solo performances from both artists, as well as a joint live session with Beaini's Upperground Orchestra, a loose collective of self-described jazz nomads who explore the intersection of jazz and analogue electronics in improvisation.

By collaborating with Cohen and issuing part of his musical legacy, Beaini also, in some way, reifies it. But helping vitalize Cohen's legacy also advances Beaini's broader aspirations for Morphine, shared by CTM and, arguably, most who contribute to music in some way: to provoke critical thought around music and expressive practice, and to facilitate communication across generations, spaces, places through »this spreading tool, which is the vinyl.« The emissary? »The emissary, yeah. Transmission.«

Katerina Leinhart earned her B.A. from Ithaca College in 2011, with a focus in cultural studies and critical theory. She is a recipient of a US Fulbright research fellowship in ethnomusicology, and conducted fieldwork on ritual music in Morocco from 2012-13. She currently works with CTM Festival.



FROM FOLK CULTURE TO OPEN CULTURE: CONTINUITY, DISCONTINUITY, AND THE MUSICAL HACK

BY PETER KIRN

Against the background of the Musicmakers Hacklab at CTM 2014 and the theme of Dis Continuity, Peter Kirn explores what it means to share. He compares folk culture and music technology's take on open culture, as artists remix the very tools they use to perform.

The folk tune »Dink's Song«, also known as »Fare Thee Well«, recently had a prominent role in the Coen brothers' film *Inside Llewyn Davis*. It's called »Dink's Song« because the woman who once sang it was named Dink. As told by American singer and folklorist Pete Seeger, the story is that musicologist John Lomax found Dink among labourers working on the Mississippi River levees during the First World War. Dink sang her mournful melody into Lomax's recorder while she was washing clothes.

That song has lived on in covers by Pete Seeger, Joan Baez, Dave van Ronk, Jeff Buckley, Bob Dylan, Anna McGarrigle, and Roger McGuinn. In each rendition, the achingly pretty melody reveals some new facet of its ode to longing and regret.

This is the essence of how music works – or, at least, how it had worked in folk music for millennia. Learning »Dink's Song« is an exercise in human-to-human access, sharing, and variation. Before the remix (or »remix culture«), there was the »cover«. Before covers, there were simply people singing songs.

Could electronic music and the technology of music-making ever have the immediacy of someone singing? Could software or a circuit ever be shared like Dink's song?

That challenge is the heart of the hack.

Music culture is fundamentally about continuity and discontinuity. It is the act of transmission – lyrics and melodies, structures and techniques, learned from one another and transformed and shared again. Music technology can do violence to those human connections in myriad ways, from tectonic to subtle. Recordings might sug-

gest you don't have to sing a song in order to recreate it. Software creativity can seem nothing more than bundles of loops and samples, arranged by preset formula.

But these same technologies are part of music culture. Baez and Buckley learned »Dink's Song«, in fact, thanks to Lomax's portable Edison recorder; now, surely that access has exploded with the Internet. And musicians not only still sing, but also take on electronics and machines as their »voice«. Music is made on machines, but still by humans, for humans.

The criticism that musical tools shape the music they produce is dead on. But there's a next logical step to respond to that concern. To freely shape music and trade musical ideas, you need to be able to take a hand in shaping the tools, too. You have to be able to hack your instrument.

To a less technically literate culture, the word »hacker« is associated with security problems and break-ins. It reflects a view of technology as sinister, not to be tampered with. But developer communities, whose use of the term predates this other meaning, take a different view. »Hacking« is a banner for ingenuity and unexpected creativity, for pranks and cleverness and rapidly concocted transformative invention. It rewards shortcuts and ground-up knowledge and breaking rules. And hacking has become a communal event – the technological equivalent of a clambake or a knitting circle or a barn raising. Developers stage hackathons and hackdays, competing and collaborating in collective groups.

Once they start to work in groups, there are parallels between open culture – even in tech – and folk culture. Here's how the International Folk Music Council defined folk culture in a 1954 Sao Paulo conference:

»The factors that shape the tradition are: (i) continuity which links the present with the past; (ii) variation which springs from the creative impulse of the individual or the group; and (iii) selection by the community, which determines the form or forms in which the music survives.«

The version control software Git, which is the basis of popular service GitHub and used for everything from code to recipes (and now, electronic musical instruments), has fundamental concepts that are equivalent. A »clone« copies a repository of information directly, retaining the link to the original – continuity. A »fork« allows someone to create a version that is their own – variation. And those changes can then be »merged« into a shared version – selection. Of course, this definition requires an oral tradition; the GitHub website alone wouldn't qualify. But it's telling that hackers gather with one another, and that musical hackers have done the same.

In 2007, I hosted Create Digital Music's first »maker« event in New York to bring together a community of musical inventors, including »hacked« creations. The series was called Musicmakers, or Handmade Music, and has been replicated internationally. In the summer of 2009, an online get-together called a global »hackday« on Create Digital Music was followed shortly by the first SoundCloud-organized Music Hack Day, an event which has spread informally around the world.

CTM Festival has for some years held collaborative events, hosting Share, Marius Watz' »Generator.x«, and various other projects and workshops. Last year, CTM Festival built on that tradition with its first edition of the Musicmakers Hacklab. There, creators – from instrumentalists to fashion designers – worked together to devise new means of playing music. Visual and sound artists worked together to allow their creations to speak to one another; inventors found new ways of connecting performance to image and sound. A group of artists joined UK singer and producer Imogen Heap to use her team's wearable glove interface. They built new interfaces between the digitally sensing gloves and more traditional forms, combining its use with cellists, singers, and dancers, measuring heartbeats and turning the waggle of a finger into a synthesized sound or image.

The exercise is not simply technology for its own sake, not only science fair projects meant to dazzle and impress. Hacking the performance interface means the ability to return technology to the human scale.

With the complexity of tools today, many technologies have to be bought in shrink-wrapped boxes, encased in metal and plastic the user dare not open. And developing a system in hardware or software doesn't automatically produce something that can make sense with the human gesture or utterance.

Perhaps that's why the hack is so important – and why it matters to take things apart. Even learning a song isn't always easy. Melodies can often be repeated rote. But perhaps you want to learn the guitar part on the Oscar Isaac / Marcus Mumford version of »Dink's Song«. That might mean hours disassembling and re-assembling chord changes and guitar patterns – reverse engineering, as the hardware geeks would say. The transmission is still oral, but some assembly is required.

Those assembly skills are then badly needed in music tools, whether engineering new instruments or simply finding a way to go around presets. Otherwise, there would be little discernible difference between consuming music and making it; there needs to be continuity, yes, but also variation. Making music wants to be more than just pressing play.

Likewise, if music is emotional utterance and not just the production of sound, then you have to test the outcome. Music technology should still hit you in the heart, the toes, the gut. That means testing the inventions in the world of performance. So, we're pleased this year to audition these technologies in front of audiences, in real time, with mistakes and live players sweating.

The Musicmakers Hacklab at CTM 2014 will culminate not with a set of presentations or a show-and-tell, but a performance in HAU2. We have to play our inventions, stomachs full of butterflies, in the same room, not safely hidden behind the world of social networks, upload sites, and streams.

We'll also make an ensemble out of »WretchUp«, a mobile app built by Florian Grote and myself in collaboration with Mouse on Mars and Rupert Smyth, as the artist/developer team plays the app live. Inside is an open-sourced microcosm of shared culture: the app's code is available as open source software, running on the libpd library built on Pure Data. Pure Data, in turn, builds on years of contributions from a community of users, and the patch WretchUp runs on at CTM builds on that as well as modified patches.

These projects build on years of history. In the Hacklab, Leon Theremin's pioneering 1920s circuit will live again in a remixed design by Andrey Smirnov, then appear in participants' own projects. Synthesis libraries now represent decades of research in sound, code bases that evolve over many years. This is technology that is constantly reused, not disposed. And whatever myth of from-scratch creation people might imagine, every electronic production – built on proprietary tools or free ones, simple circuits or complex ones – stands on the shoulders of giants, to quote Isaac Newton.

It's easy to imagine that these are elitist endeavours, ways of justifying fancy silver laptops and tablets for those with the income to buy them. Nothing could be further from the truth. Embedded processors are exploding at a rate that threatens to catch up with the human population, new computers approach stunningly low costs (the Raspberry Pi at \$25), and sound circuits can be made from even simple components. These tools draw a line across a century of technological innovation in sound.

The question, then, is one of literacy and community. The technology is everywhere, as plentiful and pervasive as the human population. Now, can we, together, make those machines sing?

Peter Kirn is a composer, electronic musician, and visualist, and runs createdigitalmusic.com. He is the founder of Musicmakers and co-presents this year's Hacklab with Darsha Hewitt.

THE OUTERNATIONAL CONDITION

BY ION DUMITRESCU

Romanian musician and DIY archivist Ion Dumitrescu explores the creative evolution of experimental music in Eastern Europe before, during, and following the fall of the Iron Curtain. He adopts Outernationalism as a framework for considering the cultural production of nations peripheral to Western economic and political axes of power, whose histories of musical innovation are only now beginning to gain broader international awareness.

International

Throughout the 20th century, for various political, historical, and economic reasons, a wealth of writing has been published in North America and Europe, documenting, contextualizing, and categorizing artistic expression from global cultures and determining their place in *the history*.

At a first glance, »international« might just designate a neutral economic realm of transnational trade relations, but upon further inspection delineates a continental separation between developed and under-developed groups of countries, with far-reaching consequences for artistic trajectories and cultural production. Regarding the music market, the US, Japan, and the UK dominate in record sales, followed by France, Germany, Canada, Spain, Australia, and a few more. One could safely assume these countries represent, to a certain extent, the International music industry.

Yet for decades now, another shapeless world has been developing at the periphery of the International sphere. Comprised of many diverse countries with complex socio-political histories, this outer domain holds some common features regarding modes of music production, consumption, and proliferation. Today for this outer-world we have diverse names. One of the most (in)famous is »world music« (»musique du monde«); another term less frequently used but randomly appearing is »Outernational«.

Of course it is a blurry map, with lots of intersections, exceptions, and indistinct borderlines. Brazil stands out as a particular example within the Outernational sphere, already in the 1960s managing to reach out to the world through its cultural production in spite of a harsh dictatorship at home. As stated in Oswald de Andrade's *Manifesto Antropófago*, the Tropicalia movement cannibalized Western culture and transgressed genres and territories, with Tropicalia records released to great success both in Europe and Brazil. Brazilian musicians set foot in the International history very early on.

The cases of artists like Fela Kuti or Bob Marley add to the fogginess of the International-Outernational distinction. Once arrived in London or New York during the 1960s and 1970s, their music influenced Western sounds forever, revealing whole new genres and instantly becoming internationally famous.

Outernational

From the outset, the Outernational domain seems defined by obscurity, grey margins, unequal times of exposure, dark spots, frequent amnesia, and violent shifts. Due to totalitarian regimes, wars (warm or cold), post-colonial lack of autonomy, or just poverty, the Outernational body occupies a space outside of history, sometimes considered an echo of the International core but mostly unknown. Many artists in these peripheral regions were active for a few years in the early 1960s through late 1970s, and then disappeared with almost no trace. In some cases, entire music scenes

would disappear or radically transform, as in Iran before and after the 1979 revolution, in Romania after Ceausescu's July thesis, and in Turkey between coups d'état. Already we must separate two phases of Outernational production in regard to their specific historical conditions. The first would roughly extend from the 1960s to the 1980s, the second from the 1990s through to the present day.

Unlike the International music scene, the Outernational is an uneven terrain, perforated by numerous holes and discontinuities and marked by lack of memory and archival consciousness. These out-of-history artistic expressions never consolidate; they linger in partial isolation and hard-to-trace genealogies. The spectre of disappearance is always on the horizon. Even today, International and Outernational standards for music production and diffusion are completely different. For instance, Romanian manele – the contemporary Rroma music that has spread around the Balkans with different flavours and modulations – is living off the wedding industry. Musicians release singles and YouTube videos just to ensure the flow of wedding gigs (similar to dabke or halay artists). Sometimes the music is hybridized with pop and dance beats in an attempt at the mainstream, but local manele stars usually earn their main money at mafia bosses' family events. Manele music never gets aired on radio (a characteristic with clear shades of discrimination towards the Rroma people) while TV stations have embraced it periodically in a tabloid way. Although there are hundreds of manele artists, they all operate through two or three agents, and recording and production is limited to very few studios.

The overlapping of the mainstream and underground is a common contemporary Outernational paradox. The manele case is very telling, being both underground and overground, having millions of listeners but never showing up in local tops. Even if orthodox (Western) market procedures operate in some of these border societies, with states joining the European Union, others maintain an Outernational dynamic with kinship industries, mass piracy, and unfettered copyright infringement.

Digging in the Netherworld

The International sphere is self-sufficient. It lives out of its own production and consumption. It's hard to penetrate from the outside, although it touches the far corners of the globe. International music and stories will always come to you; it's hard to avoid them. On every channel, through every social network and music platform, International patrimony is shot from a ubiquitous centre in all directions. It's a Shakin' Stevens poster in a Himalayan shack or a Coca-Cola add in a Siberian village. By contrast, the Outernational is always hidden, mazy. Today, one still has to invest a lot of effort and patience to accede to those regions, searching local YouTube channels or Trojan-infested download forums, for phone-recorded Kurdish or Azerbaijan weddings, or through a jungle of pop-up windows. Although CDs are sometimes released, they will almost never be indexed on Discogs or similar Internet archives.

Meteorites (outsiders) do occasionally breach the International market, but rarely is a whole Outernational scene or genre exposed. Take the case of Omar Souleyman, who surfaced in the West after a few hundred albums already released in his country. It's true that »album« in Outernational jargon often means a recorded live wedding performance. But Souleyman is just one among hundreds of dabke artists that have been moulding this genre for the past twenty years.

»I hate World Music« – David Byrne

The »world music« niche has flourished for the past twenty years through dedicated promoters, labels, and festivals. Already heavily criticized, it continues to show music from the »world«, but we never see folk music from Europe and North America in these festivals, or contemporary subjects performing the present-day music hybrids of their »worlds«.

»World music« is the rest of the world that the »main world« has accepted ideologically, the profile of the »savage« reshaped and repacked to make it digestible (profitable) inside the International industry. The concept of world music seems extracted from a PR debate, the outcome of a marketer's brainstorming. Under this umbrella, musicians (albeit great ones) and genres are often displayed as exotic-primitive with acoustic instruments, representing the »traditional« felt as lost or artificialized in the West. World music presents non-Western musicians, usually without technology, from areas apparently totally isolated and unchanged for hundreds of years. The past pulsates in the present, without contextualization or distinction. »World« artists are represented as tamed and harmless indigenous; the former colonies are again infantilized and exhibited as such. The market structures pinpoint the global »surround« sound, measuring and exposing the West/North radius.

For the Western consumer and remorseful former colonialist, world music is pure. It resonates with New Age ethos, presenting music cultures as unaltered by the tribulations of civilized, urban, Western developments. The occidental spectator is thus glimpsing himself as a less rational, less developed subject, but more sensitive, overwhelmingly emotional, and *real*. This is the spectacle of the outside sphere, the exotic vitrine full of »authentic« items that has become a substitute for spiritual experiences.

World music is not international, but is somehow an intensification of International and Outernational divisions. One will never get to hear, in world music festivals, contemporary hybridized and electrified Kurdish halay, Romanian manele, Bulgarian orchestras of chalga, Peruvian chicha, Palestinian dabke, Mexican narcocorrido, or many other genres and styles. The effervescent contemporary music of these netherworlds is truly left outside because of uncontrolled tensions, problematic affinities, and hard-to-frame expressions.

The abandoned congress hall on Mount Buzludzha, Bulgaria, built by the communist party in 1981. Photo by Gabriel Basha.



The Outernational Scenario

The historic pattern usually goes like this: At some point during the 1960s, (many times even 1965 specifically), there was an »opening«. In Romania, Egypt, Iran, Turkey, Thailand, and Brazil, American and European music suddenly pierced through walls. The capitalist media machine was spreading its information faster and faster on all continents, with a profound impact on local pop cultures around the globe. Youngsters in Turkey were listening to American army radio stations based near Izmir, feeding firsthand from the pop culture of the West. In Romania, General Secretary of the Romanian Communist Party Nicolae Ceausescu's brief »enlightenment« period after 1965 brought jazz and pop musicians like Louis Armstrong, Lionel Hampton, and Cliff Richards to Bucharest, while English and American music was heavily aired on the radio. US president Richard Nixon visited Romania in 1969.

All this sudden exposure spawned the first hybrids of the Outernational sphere. In Turkey there was an explosion of psychedelic rock: Barış Manço, Erkin Koray, Cem Karaca, Moğollar, Uç Hürel. In Romania a beatrock scene emerged: Sincron, Roşu şi Negru, Sideral, Phoenix, and others.

The »opening« happened to varying degrees and lasted between ten and fifteen years. Usually it was followed by a negative closure, whether through cultural revolutions or returns to social totalitarianism, and a climate of artistic and intellectual regress was reinstated. Western pop culture, once acceptable, became regarded as a soft power weapon. During the 1970s and 1980s, many countries (especially Romania) restrained the info-flux from the West and steered towards nationalist propaganda.

The pseudo-underground music retreated further in the 1980s as isolation increased. Experimental bands disappeared or transformed, releasing only naively utopian, easy listening tunes and albums. But in partial isolation other genres emerged, unexpected mutants like proto-manele, a sort of proletarian party/restaurant music, an Indian-Oriental 8-bit combination. Generic, Azur, Albatros, Tomis Jr., Îngerii Negri are emblematic artists of this genre from the late 1980s to early 1990s.

The Iron Curtain

Behind the Iron Curtain, there was usually one label per country: Electrecord in Romania, Melodya in the Soviet Union (by far the largest in the Eastern bloc), Moiras in Hungary, Balkanton in Bulgaria, Yugoton in Yugoslavia, Amiga in GDR. These labels were not aligned with the laws of local or global markets. Although national popular artists were aired on radio and TV and featured in youth magazines and local pop tops, party politics still typically dictated the artistic production, with decisive power over the number of records pressed and the distribution of licenses for playing live. Labels had clear politics regarding the music of minorities, and were obliged to release a certain number of albums with »traditional« music, as defined by the ideology of the given period. Everything was made according to a plan that had to be regularly re-checked by bureaucracy and censorship.

Consequently, bands and artists concerned with rock, jazz, and some other Western-influenced pop had a hard time playing and, most of all, recording. But the cultural production plans of the state were not always so effective. In Romania, before Ceausescu's mini-cultural revolution of '71, Western contaminations started to give rise to new sounds, bands, and student festivals and venues for this new music.

In the first stage of the post-1989 transition, State-owned labels disappeared in a few years leaving a no-man's land where piracy, DIY cassette reproduction, and black market behaviour ruled. By the late 1990s, the vinyl warehouse of Electrecord in Romania was randomly emptied, the catalogue discontinued, and finally the warehouse itself dismantled, with the remaining records being (literally) dropped by tip lorry at the dump. Music lovers and doers adapted yet again, employing new modes of music proliferation, crummy local production, and unsophisticated replication technologies.

Recuperation

The present-day music of the Outernational sphere is almost non-existent on SoundCloud, Mixcloud, or online platforms such as Juno or Beatport. If one wanted to map the musical landscape of Eastern Europe in detail, one would have to undergo totally different procedures of digging. Excavating in this nether-sphere has never been easy, in cities with few record stores and an atrophied culture of archiving. Digging or researching in Romania is done within dead pre-'89 institutions or ghost archives, on the Internet on YouTube and local eBay-type platforms (trilulilu.ro, okazii.ro), in people's homes, and at flea markets. It is based on rumours and lost and found tapes.

After decades, Outernational regional history has been partially »re-scanned«, and fragmented histories have come to light. Following the collapse of the Communist bloc, Western European institutions progressively recuperated many of the visual artists and musicians of the 1960s and 1970s. Recuperation, re-construction, re-enactment, and digging have been the buzzwords of the last fifteen years. Thus a wide range of fringe expressions, sounds, and music has been discovered in the former socialist countries, and connections, common backgrounds, or endemic crossbreeds have been made visible and contextualized.

But even today, entire contemporary sonic realms are inaccessible to the Western/Northern hemisphere. Musical masters of the first period of Outernationalism have remained exterior to rock, jazz, electronica, and pop history. To name a few: Kourosh Yaghmaei, Ahmad Zahir, Rodion G.A., FSB, Sven Grünberg's Mess, Simo Lazarov, Czeslaw Niemen, Erkin Koray, Krzysztof Komeda, Mini, Mehrpouya, Aris San, Oko, Charanit Singh, Farid El Atrache, Orhan Gencebay, Tempano, San Ul Lim, William Onyeabor. The process of resurfacing the giants of the first period of the Outernational is still ongoing, through passionate Western labels like Grey Past Records, Strut Records, Finders Keepers, Sublime Frequencies, and Pharaway Sounds.

Rodion G.A.

A typical case of Outernational destiny behind the Iron Curtain is that of Rodion G.A. Rodion Roşca began making music during the Romanian cultural open period between 1965 and 1972, collecting records at home and in neighbouring Hungary and experimenting with making his own recordings. He developed his own DIY techniques of recording and editing, becoming, by the late 1970s, a proto-bedroom producer. He was a pioneer by making his own echo generators out of Tesla reel-to-reel machines, sampling parts from previously recorded tracks with Rodion G.A. at Radio Cluj in order to manufacture new tracks. He also managed primitive multi-track recording by switching and merging left and right channels, adding guitar, synths, beats, and FX. After finishing a new track he would send the tape to Radio Cluj to air.

All tracks featured on last year's historic release *The Lost Tapes* (Strut, Future Nuggets, Ambassador's Reception) were made like this, in Rodion Roşca's apartment. His totally unique production methods are one of the reasons his sound is hard to trace. Although one might recognize shades of krautrock or other familiar cosmic synth textures, the genealogy between his creative output and that of the West is broken. Due to the particular circumstances and unique means of production, his musical imprint seems fabricated on another planet. Weird prolet-galactic skins with visceral fuzzy frequencies dominate his sound universe, along with a focus on classic melody. Between 1979 and 1987, Rodion G.A.'s songs reached number 1 in the radio charts across Romania, but the band rarely performed live. Only two of their tracks ever saw release, both appearing on Electrecord rock compilation *Formații Rock 5*.

Rodion G.A.'s appearance at CTM 2014 marks the band's first performance outside the Iron Curtain.

[Ion Dumitrescu](#) is currently part of the Postspectacle project, dedicated to exploring the political dimensions of performance and creative activity, and is a co-founder and member of the Future Nuggets music collective in Romania. The group has released two albums: *Sounds Of The Unheard From Romania* and *Steaua de Mare* (Ambassador's Reception/Future Nuggets 2012, 2013). He is also a co-curator of Rodion G.A.'s *The Lost Tapes*, released via Strut Records in 2013. *** www.futurenuggets.com

THE DEATH OF WORLD MUSIC

BY JOHAN PALME



Director Clarence Peters sets up a shot for a new music video with the singer Lace. Photo by Team Capital, www.teamcapital.info.

On 29 June 1987, at seven o'clock in the evening, a meeting was held at a pub in central London. Present were fifteen men and four women, all British or American, representing independent record companies and media organizations. The title of the proposed agenda was the rather cryptic »International Pop Label Meeting«, and the basic suggestion was one of co-operation: that the labels in question would pool resources, work the press, put out a cassette compilation together. And, it was decided, as the very first and very central issue, that it would be done under a newly coined genre name, a new market category, a new box in the record store: »world music«.

Director Clarence Peters sets up a shot for a new music video with the singer Lace. Photo by Team Capital, www.teamcapital.info

The participants all shared a central premise: that what they did as record companies was vitally important. The »market« in Britain, they had observed, systematically excluded all music that wasn't (in their own words) »American or a local copy of it«¹⁾. All of them worked, often tirelessly and without making a significant profit, towards channelling other types of music onto that »market«, identifying artists they thought would appeal, setting themselves up as producers and providing studios, creating collaborations across borders, providing marketing materials. Working together, as the »world music record companies«, was only another logical step in their work to bring music from outside Britain to the local public, as intermediaries. They were doing what they saw as a good deed.

Of course, the tale of that June evening meeting is rather famous by now, at least in certain circles of debate, to the point of being hackneyed cliché. The values attached seem painfully naïve, the tropes and choice of words from a different era. The public that did indeed buy into »world music« is aging and disappearing. And yet, that very central idea, that of the good, hardworking intermediaries, has a persistence that seems to transcend any specific style, language, or label. It existed long before June 29, 1987, and it very much has continued to influence the way people think about music distribution, no matter that no-one publishes Charlie Gillett World compilations anymore.

I should know, because I've certainly been part of that trend.

From 2007 to 2010, I ran a blog about music from a global perspective. Before that, a student radio show. Afterwards, a tumblr microblog. Throughout, mixed with more healthy criticism, I've shared tracks and trends from throughout the musical world. I've hated on world music and its values, yet to an extent certainly been part of them. In that sense, I join the ranks of the oldest of ethnomusicologists, recording folk songs on tape to make them better known. I continue the work of Folkways recordings in the 50s, collecting commercially viable records among the poor. I'm analogous to people that produce compilations of old highlife or chicha records, or of genres from the present day, whether Venezuelan rap-rhyme house, the music of the Sahel, or South African kwaito-tinged house. And in one sense I'm not really that different from all those European and American musicians who have collaborated with, sampled, and produced musicians from other parts of the world, whether they're named Paul Simon or Diplo.

These producers, executives, bloggers, DJs, fans, and writers all have different ideological premises and worldviews. Their music and methods are almost unrecognisably diverse. Their own contributions can range from minimal - like me, the blogger - to being the act themselves. There may or may not be a point to applying the standard objections to world music - that it's exotifying, maintains a constructed north-south or east-west divide, or is overly concerned with fake notions of authenticity. Some are like that, some not. But we've all got one thing in common: that intermediary nature, that position between a local public and music from somewhere else. And that probably makes more difference, in the end, than the particular ideological trappings in which we intermediaries might wrap ourselves.

Ultimately, the license to control the flow of music is a structural position imbued with a great amount of power. All talk of globali-

zation notwithstanding, our world is one of sharp divisions. There persist vast differences in resources, privilege, and access to the world's ears. Western Europe and North America have a music-buying public, a »market« if you will, with more net resources than anyone else. It's also where the large majority of internationally spread ideas are formed, and where »global« media is headquartered and run. And if what the intermediaries think is true, then access to those resources, those centres whose ideas trample over the world, is dependent on going through the intermediaries.

Artists thus find themselves in a potentially inferior position in terms of power to the intermediaries; if they want those resources and that access, they have to go through these middlemen. (Yes, the majority certainly are men). The intermediaries, in turn, have a choice of what exactly to publish or promote, and can use their leverage to direct production, marketing, and even the music itself. Sure, some of this relationship exists with media and record companies sharing a locality, but the geographical distance and the hugely divided global power structure amplifies it massively. This is true even with supposedly equal co-operation. However much you try to mask it, there's no escaping the basic fact that one party is dependent on the other for access to a potentially huge source of income.

Why does this matter? Well, obviously the basic premise of putting even more power in the hands of people from Western Europe and North America is problematic: privileged people continually benefitting from the inherited colonial system of their ancestors that caused the inequalities in the first place. That a single, relatively homogenous social group has control over almost all music on the market here in Europe (both locally produced and imported) is another problem. But it also directly influences the music, and we're all the poorer for it.

On a very basic level, any sort of intermediacy will involve a level of selection. Whether it's the compilation-maker curating their choice of pre-existing tracks, the A&R representative having the pick among new artists, the producer deciding to streamline all sorts of musicians in a particular direction, or the marketer using particularly trendy and conformist graphic design, intermediary processes will always involve reducing diversity to fit particular ideas. This is even more distinctly true when it involves a translation, an adaptation of music created in one context for a new audience. (Of course, yet again, this is greatly amplified by geographic distance and difference in resources). Selectivity, generally, is already by its very nature reducing the variety of music that reaches the European market.

But beyond that, we have to think about what kind of selectivity happens. Selectivity is rarely random; it follows patterns that are themselves structural, patterns of power and privilege. In the classic styling of world music from the 1980s and 1990s, this would involve things like excluding anything that was in any way threatening, making sure the music was as neutered and harmless as possible, or overemphasizing the concept of »roots«, denying the possibility of acting in modernity to anyone but their constructed »North«. Or, the obsession with finding music »forgotten by society«, Buena Vista Social Club-style, denying the value of the tastes of the majority of that locality's population.

Or let's take an example from more recent intermediacy. The Bra-



Johan Palme is a freelance writer and a board member of the CinemAfrica festival in Stockholm, Sweden. He writes extensively on music, politics and the global image of Africa. From 2007 to 2011 he ran the critical music blog Birdseed's Tunedown.

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*** www.les-siestes-electroniques.com

*** www.revue-audimat.fr

Director Clarence Peters sets up a shot for a new music video with the singer Henri Soul. Photo by Team Capital, www.teamcapital.info

zilian genre funk, in Eurocentric media often »baile funk« or »Rio funk«, grew out of the poorer neighbourhoods in the city in the 1990s, influenced chiefly by bass and freestyle music coming out of Miami. From the very beginning, funk contained both macho, hard-edged songs mostly consumed by men, and more romantic songs mostly consumed by women. If you listen to early compilations of the material from Brazil, the division is almost fifty-fifty. But as soon as European and North American collectors and compilation-makers started showing an interest in the genre, the romantic, female-oriented style was all but erased from its history, and the only thing that made it across was the supposedly »masculine« sound. It's as if a combination of patriarchal male dominance, the relatively few women among collectors, and stereotypes about the favelas all fell into place to shut half of the music out. (It probably didn't help that the journalist that »broke« the genre in the mainstream US press was Neil Strauss, author of *The Game*).

The structural position of the intermediaries matters. Even if intentions are completely innocent or even noble, the position itself is the problem. If history and the social sciences have taught us anything, it's that the trouble intermediacy causes won't go away until that structural position somehow changes. And to a certain extent, that is precisely what is happening right now.

Part of the paradigm shift in music production and distribution, of course, has to do with the Internet. Relatively free access to material on a site like YouTube means word of mouth, which, at least in theory, is much more likely to spread across borders, even between the poor world and the rich. Additionally, the wealth of material readily on offer allows individuals to discover music beyond record company catalogues, should they wish to do so. To an extent, the Internet has started to render intermediacy irrelevant. But there's another structural factor that's possibly even bigger. After all, even on the Internet most people rely on local tastemakers to filter their consumption. The single most important new structural element is the rapid development of the hardware industry, and the way professional technology has gone from being prohibitively expensive to readily available across the world. In no more than three or four years, the technical quality of recorded sound, images, and promotional materials has skyrocketed in countries that used to rely on old studios, photocopied posters, and grainy DV, and the music created is practically unrecognisable.

A video like the one for Nigerian singer Davido's track »Dami Duro«, directed by compatriot Clarence Peters, shows just how stark this change is. Full of professionally shot images of perfectly coiffed

people riding cars and throwing around money through a darkened cityscape, with minute details and cutting montages, it stylistically and technically outstrips the vast majority of European and North American music videos. The prolific Peters is just one of dozens of new music video directors now filming beautifully shot, ambitious clips in crisp HD across Africa and the world.

This change has started to make an impression far beyond the original audiences. In May 2012, the single »Oliver Twist« by another Nigerian, D'Banj, entered the top ten of the British charts. Remarkably, it did so with promotional materials and a music video created for the Nigerian public, copied straight across for the new »market«. The most direct of the intermediaries were suddenly from the global south themselves.

The concept of »afrobeats« (with an »s«, it's not Femi Kuti we're talking about here), West African-styled pop music with contemporary production primarily recorded and created in Nigeria and Ghana, is hitting off in a major way among young people in much of Europe, and we're seeing diasporic outcroppings like »UK afrobeats« copying its style wholesale. A similar story is happening in the South African house scene, where tracks like »Turn Me On« by Black Coffee and »Hiya Kaya« by Kentphonic have worked themselves deep into UK urban radio, again without resorting to exotifying middlemen.

Are we seeing an impending shift of music's centres? Will people around the world look to Lagos and Johannesburg for inspiration? It's possible - let's not forget that similar things have happened before, not least with the Jamaican music industry that stands quite apart from »world music« and has done so for decades. Or we might end up with a more mutual, open exchange like the one that has long characterised the relationship between Paris and various French ex-colonies. At the same time, let's not forget that this top layer of best-selling African music is still distributed through US-based multinationals and is very much in line with the selling points of international pop.

And yet, these newly confident systems of distribution and marketing break a powerful illusion: that of the poor, hidden artists from the third world needing a helping hand from intermediaries, and this might just finally and comprehensively knell the death of world music.

¹⁾ Anderson, Ian (2000) *The History of World Music*, internet resource: www.frootsmag.com/content/features/world_music_history



ASTA The Hague, the Netherlands

Text by Tim Terpstra and Guy Tavares; Photo by Christian van der Kooy

The ASTA complex in The Hague's city centre was built in the early 1920s and, a true monument of architectural design, became one of the most prestigious Dutch movie theaters. In 1996 the building was transformed into a commercial nightclub (home to superstar DJs such as Tiësto and thus sarcastically referred to as the »Asthma« by local scenesters). Since the early 1990s the ASTA and surrounding venues such as Voltage (a former Caribbean discotheque) and Iets Vrijers (the re-squatted former alternative music bar, Nastasta), played a defining role for both the local popular club culture and the myriad of small yet international innovative art and music movements. Due to drug, violence, and bankruptcy issues, the ASTA closed, reopening its doors several times until the lights went out permanently in 2009. In 2010 the Today'sArt festival joined forces with several cultural collectives to occupy the ASTA building, in a statement against the city's new Anti-Squatting Law, as well as against proposed arts and culture budget cuts and other issues. Protesters criticized the city's absurdly expensive plans to »redevelop« the nearby Spuiplein square by turning it into a megalomaniac cultural centre, hence also questioning The Hague's dubious »European Capital of Culture 2018« candidacy. As many participated in the various activities organized immediately after the ASTA's occupation, the fire department declared (by decree of the mayor) the building as unsafe for public use, though not long before it had been a fully-licensed enterprise that attracted large crowds. The squatters were forced to move out in a matter of days.

Left derelict and empty for a long time, the old cinema was finally »renovated« and a new casino opened its doors in 2013. And so the story of the ASTA ends, another typical example of the many visionless urban renewal plans in The Hague, plans that disregard any historical continuity, aesthetic value, and human-scale socio-economic and cultural activity.



YAAM Berlin, Germany

Text and photo by Bianca Ludewig

Located at the site now occupied by the ARENA entertainment complex in Berlin, the YAAM (Young African Arts Market) began in 1994 as an association for youth and culture. It quickly developed into a social fixture, a meeting place for artists, musicians, urban sports, and a leisure and recreation area. The YAAM was forced to relocate after two years due to new plans for the ARENA site. After moving into its new home at the end of the nearby Cuvrystraße, the YAAM hosted a three-day opening party, attended by 10 000 people. However, as the YAAM held an interim rental contract, they were again forced to move in 1998; a shopping center was planned for the 9000 m² lot, which was never built. The industrial building where the YAAM club used to be was eventually torn down, but any new construction plans for the site failed. Despite its long odyssey, the YAAM continued to be an important place for Berlin culture until today, eventually landing at the Ostbahnhof, which it must vacate in 2014 to move into a neighbouring building, which currently houses the techno club Magdalena (see page 83).

Since 1999 the empty lot at Cuvrystraße has been used as an open air gallery and hangout spot by the Spree. When, in 2012, the BMW Guggenheim Lab wanted to appropriate the location for six weeks with an art project, local protests were so intense that the Lab decided to locate in Berlin-Mitte instead. A new initiative evolved from the protests: Camp Cuvrystraße/Freie Cuvry Brache. As most activists left, new inhabitants moved into the Camp's infrastructure: homeless, dropouts, punks, and young idealistic people from all over the world that can't afford the rent in their new hometown. In 2013 Camp residents began to build huts, intensifying construction in order to get ready for winter, and a small village emerged. One of the last free non-commercial areas in Berlin, the Camp is constantly under menace of eviction. »We are still here and we want to stay!« reads their Facebook page. Since 2011 the site has been under the ownership of Nieto GmbH Munich, who plan the construction of flats and shops in 2015.

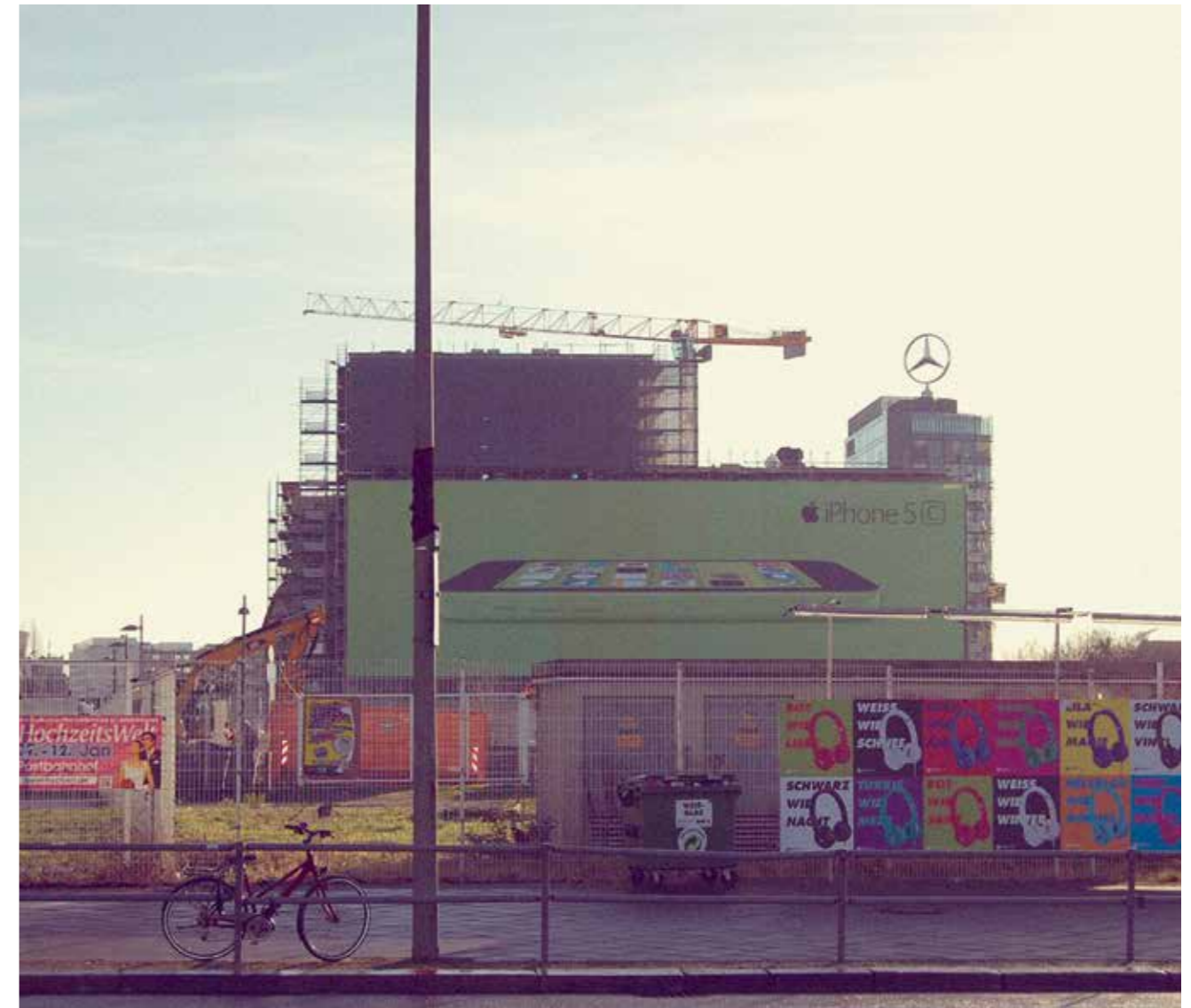


HACIENDA Manchester, Great Britain

Text and photo by Michael Duffield

The iconic Hacienda nightclub opened in 1982, in a former yacht showroom in Manchester. Its interior, designed by Ben Kelly, used the industrial warehouse space in a way that set it apart from other nightclubs at the time. In its early years, it played host to performances by the likes of the Stone Roses, The Smiths, and bands signed to Factory Records, such as A Certain Ratio, the Durutti Column, and the Happy Mondays, but live music wasn't profitable for the club. Before the end of the decade things started to change, with the introduction of regular club nights by DJs such as Mike Pickering, Jon Da Silva, and Dave Haslam, as well as with the arrival of the rave and acid house scenes. Ultimately the club was ruined by an invasion of rival drug dealers and the violence and money problems that followed in their wake. Despite the negative reputation it had developed, the Hacienda retained a strong community. It closed down in June 1997.

The building was sold-off and demolished for redevelopment in 1998. Various features of the Hacienda, even the brickwork, were sold at auction, and the proceeds donated to charity. The Hacienda meant a lot to people; they were not impressed by the apartment building that was built in its place. The property developer took the controversial decision to use the Hacienda name and the marketing was criticized as a clumsy attempt at linking two incompatible concepts. The most crass gesture the developer made arrived in the form of the advertising slogan »now the party's over, you can come home«, which was displayed on hoardings around the construction site.



Club Maria am Ostbahnhof Berlin, Germany

Text and photo by Bianca Ludewig

Club Maria am Ostbahnhof started in 1998 at the Straße der Pariser Kommune 2, which was then a combination of an empty staircase and sorting facility building, and part of the former East German post office station and cargo/parcel collection point near Ostbahnhof. Maria am Ostbahnhof was home to various types of electronic and experimental music, but also held traditional concerts by influential artists and bands. The club was forced to close on 2 January 2002, due to urban development projects. It held an extensive New Year's party leading up to its closure. The old building was demolished, but new construction plans were never realized, and the lot remains empty even today.

In 2003 the Maria Club reopened in a nearby former boat engine manufacturing building. The empty building stood right at the river Spree, next to Schillingbrücke. The grounds and building were owned by the city of Berlin, who wanted to sell the property for use in the controversial investor construction project, »Media Spree«, a project that envisioned a big hotel and office complex. The project's start was delayed, but Maria Club decided to shut down instead of continuing for a limited time and for an insecure future. Other projects moved in since then, including Magdalena Club and ADS Club. As it turned out, the ground was contaminated and cleaning efforts were too expensive for investors. Surprisingly, the city decided to once again rent the land and building to a cultural operator - this time to the YAAM (see page 81) which in 2014 faces eviction from their third home, currently next to one of Maria's former homes. Club Maria am Ostbahnhof hosted the CTM festival eight times in its history.



Fáklya Budapest, Hungary

Text by members of the Ultrahang Festival. Photo by Káiroly Zólyomi

Once, at the beginning of the new millennium, I find myself at the Fáklya club, at some kind of industrial-techno-EBM party. The venue seems dark, sinister and decadent, harsh noise, pumping rhythms, constant smell and dense feel of smoke, no air, and no way to see three meters beyond. I pass by a side room, where I see a half-naked bald guy getting a new tattoo, just like that, on his bleeding head. I walk on, into the crowd.

Fáklya (meaning torch) is situated next to one of the main railway stations in central Budapest, and used to belong to the Socialist Regime's network of Cultural Centres. For decades, such centres provided guided recreation to the working masses. Only programmes approved by the Communist party, responsible for the healthy development of »true communists«, could run here. Following the fall of Communism in Hungary, both the direct control of Cultural Centre programming, and state subsidies, disappeared. For the last twenty-three years, most such institutions could not find their role in the new landscape, as local governments attach no importance to culture, leaving it without resources and budgets. Hungary's Cultural Houses thus stand abandoned and in decay. In the early 1990s, following the fall of the Socialist regime, techno events were mostly illegal and held on the outskirts of the city, in abandoned factories or as open airs on the hills of Buda (the western part of Budapest). The rise of Fáklya as an underground electronic music club in the mid-1990s captures the moment when techno music came downtown, securing a foothold only to later become a trend for the masses.

As the local government gradually reclaimed control, it became impossible to continue holding wild raves in this residential area. Nowadays the place is some kind of cultural centre with halls and rooms available for rent, offering dance lessons for couples, and holding commercial retro parties, rock disco parties, or graduation events for high school students.



Club Zentrale Randlage Berlin, Germany

Text and photo by Bianca Ludewig

In 2003 the Zentrale Randlage venue opened on the ground floor of Schönhauser Allee 172, featuring select events and parties. Gradually it grew into a neighbourhood institution with a unique mixture of experimental art and music. As the residential area around Zentrale Randlage changed rapidly into a favoured district for new Berliners with high incomes, as well as for foreign investors, late-night dance parties were put to a stop due to pressure from condo owners and the police. New creative concepts evolved at the Zentrale Randlage from those negotiations, for instance presenting unique regular events that started earlier and combined arts, performance, film screenings, jam sessions, and music performances from breakcore to contemporary music. Other parts of the building were occupied by studios and rehearsal spaces of musicians such as Christiane Rösinger, Mediengruppe Telekommander, Puppentmastaz, Raz Ohara, or Jeans Team, all of whom also regularly frequented the club's bar and stage. This contributed to the building's evolution into an important platform and meeting point for the Berlin off-scene.

The notice of termination came unexpectedly in the summer of 2007; the former owners, who had been expropriated during the wartime period, had stepped up and claimed their property due to the right to restitution. Mediation talks with the help of the district's administration regarding an interim usage did not succeed, as the property's London owners did not want to make any compromises. Everyone had to move out by fall 2007, after which the building stood empty for two more years before plans for remodeling the space for commercial usage were realized. Half of the storefront remains unused today.

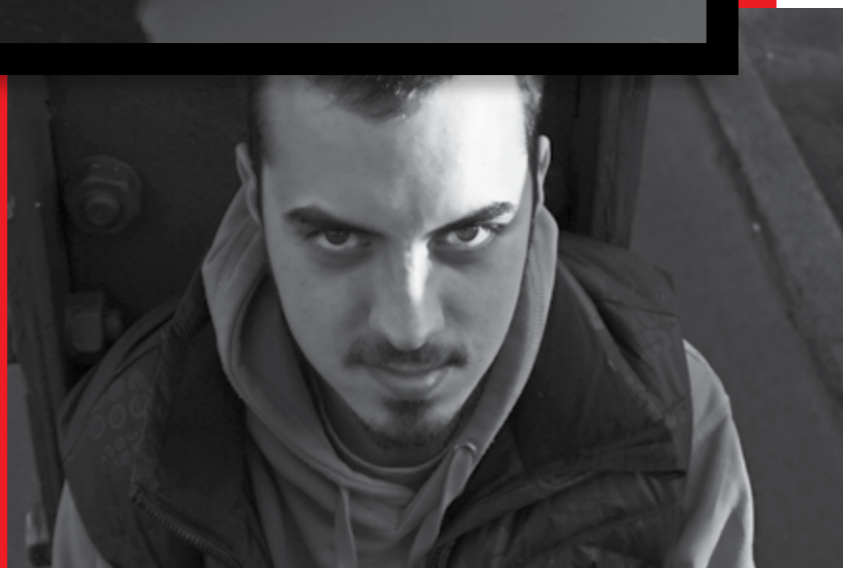
LOOKING BEYOND THE BEAT: DISCONTINUITIES IN BERLIN'S MUSICAL LANDSCAPE

BY HENNING LAHMANN

Kathy Alberici



The image of Berlin as a pop-cultural centre might still be dominated by its techno scene, but the landscape has started to slowly open up towards a wider spectrum of musical undercurrents. Henning Lahmann, editor-in-chief of Berlin-based music website No Fear of Pop, takes a closer look.



Shapednoise

In the preface to *Lost and Sound*, a stocktaking of the Berlin electronic music scene at the end of the noughties, Tobias Rapp suggests that it might be too early for the drafting of a proper historiography of techno and its entanglement with the city. Yet four years later, despite proving its undaunted vitality every single weekend in countless clubs across town, techno nostalgia is in full bloom. In his anthology *Berlin Sampler* from 2012, French journalist Théo Lessour dedicates a whole quarter of his book to the phenomenon, implicitly defining techno as the pinnacle of the city's musical development. That it effectively amounts to Berlin's continuing contribution to world cultural heritage since 1989 has by now become a commonplace perception.

However, while of course there has always been music made in the city aside from techno, only in recent years has a different story begun to unfold in the shadows of the over-arching club scene, a story not exclusively, yet in large part, told by Berlin's ever-growing expat community. Distinct from the dance community, which had already started to become more internationally shaped after the turn of the century, those artists may have chosen Berlin as their temporary or permanent home without having been attracted by the city's reputation as a techno mecca. More prosaically, what almost everyone mentions are the favourable economic conditions that make the German capital so much more affordable than any other major city in the Western hemisphere.

The work of those newly arrived artists does challenge the dominance of dance music in Berlin. Still, a common denominator is hard to find. What connects the psychedelic soundscapes of Swedish improviser Olle Holmberg aka Moon Wheel with the futuristic beats of Houston native Lotic, or in what way does the experimental proto-dance of Australian producer Phoebe Kiddo relate to the fierce noise attacks of Milan's Shapednoise? If anything, what they create is a broadly understood version of pop, »a multiplicity of artistic practices that derive from and actively participate in certain cultures of the everyday«, as defined on the webpage of Berlin Current, the project initiated by CTM Festival to unearth some of the artists that represent this »new« strand of Berlin's diversifying musical community - to be witnessed during the festival, when British composer Owen Roberts and his ensemble showcase their »Recycled Hyperprism Plastik for Amplified Chamber Ensemble«, and experimental musician Kathy Alberici sets out to musically explore the GDR's old Funkhaus, visually accompanied by filmmaker Martha Jurksaitis.

Even more difficult than finding common musical ground between the various artists, however, is assessing their impact on Berlin's scene. For many contemporary musicians, the emergence of the Internet Age has diminished the significance of an actual locus of creativity. As the existence of a locally fixed community may be disregarded, cultural production can happen anywhere. This not only holds true for the artists themselves, but also for those who publish their music. Two labels that in recent years have turned into characteristic examples of new developments in the city's musical landscape, PAN and Human Ear Music, are both run by expats who more or less accidentally ended up in Berlin. And although com-

monly identified as »Berlin-based labels«, neither PAN's Bill Kouligas nor HEM's Jason Grier consider their endeavours a real part of the city's scene. More than that, even if he managed to establish his label as a genuinely local venture, says Grier, »I would imagine HEM would appear to be a scene unto itself. That's just Berlin's nature«. Mostly connected through their own networks that are global at least as much as they are local, the changing musical landscape within the city itself remains scattered and fragmented.

For now, discontinuity within the prevalent narrative of Berlin as the city of techno is mainly propelled by and channelled through institutions such as the Senate-affiliated Musicboard and the projects funded by it, for instance Berlin Current. By starting to map the newly emerging »scene«, thus boosting the visibility of musicians that stand apart from the clubs, those organizations attempt to associate the music with a more broadly outlined notion of Berlin as an international cultural centre. Whether this effort has already come to fruition in the eyes of the wider audience is a different question.

Berlin is attractive as a place to live and work for its perceived »otherness«. Thus it appeals more due to what it is not - not as expensive, not as restrictive, not as »settled« or »finished« as other cities - than what it actually stands for. In this sense, it serves as an empty vessel, to be filled with the ideas and expectations of arriving members of the transnational creative class. For most artists, moving here is very much about »this imaginary Berlin I started to build up in my mind«, in the words of Columbian-born musician and current Musicboard scholarship holder Lucrecia Dalt, who releases on HEM.

Whatever shape the Berlin musical landscape may take in the near future, it will most likely remain in a struggle with the image of Berlin as a techno capital, a standing now written in stone. This is already evident in the discourses of today. While the fading cohort of natives and first-wave newcomers mourns the lost utopia of early to mid-1990s Mitte wonderland, those expats who arrived before the turn of the decade long for a bygone paradise that ostensibly still existed only a few years ago. To see the past in ever-brighter colours mirrored against the present's perceived staleness is certainly not exclusive to Berlin's musical landscape. But since the fall of the Wall and the subsequent opening of seemingly endless possibilities amidst the city's ruins and abandoned spaces, feeling stuck in past marvels appears to be a narrative so particular to Berlin that by now it may be considered the artistic community's only true continuity. For the incoming musician, this situation might even provide comfort, for it spares them the subtle obligation to adapt to any predefined and settled scene. However, it ultimately also means that it will be harder if not impossible to leave any significant and lasting mark on Berlin's musical heritage. Even for the city's emerging experimental pop undercurrents, transience remains the city's only persisting feature.

Henning Lahmann is a music writer based out of Berlin. When he is not working on his PhD thesis in public international law, he runs the online music magazine No Fear of Pop, and writes for esteemed intercontinental music publications. *** www.nofearofpop.net

An experiment dedicated to challenging consensus in the music and art world, »Anonymonth« will hold its first instalment within the CTM / transmediale collaborative programme of 2014. Created and lead by Mat Dryhurst, »Anonymonth« will take shape as a workshop at the festivals, exploring ways to further experiment with anonymity and dissent in creative fields. In a short, introductory text, Dryhurst explains the motivations behind the initiative, and some of its hoped-for results. »Anonymonth« will be published throughout February in partnership with VVVNT / avänt /, an online journal, forum, and project space for sharing ways of thinking with broad impact and making practical connections across disciplines. Visit www.anonymonth.com for more details.

»Anonymonth« also represents a wider expansion of PAN, a label that since 2008 has plotted a space where clubland can converse with the avant-garde, and on which Dryhurst collaborates with founder Bill Kouligas. Building a non-linear, anti-chronological collection, the label does not subscribe to a singular style; rather, it is interested in identifying unique and unorthodox expressive voices and bringing them into dialogue, exploring their intersections and the ways they reference one another.

Curated by CTM and Kouligas, PAN's CTM 2014 presence spans various events over the festival week, presenting artists whose work breaks from convention and easy classification.

Photo: Ioannis Pankoulakis



Mat Dryhurst is an artist and technologist based in San Francisco. He co-runs PAN with Bill Kouligas, and serves as Director of Programming at Gray Area. He presents work and speaks regularly under his own name and in collaboration with Holly Herndon as KAIRO.

*** www.kairo.io

*** www.mathewdryhurst.com

*** www.pan-act.com

ANONYMONT

BY MAT DRYHURST

I believe that the people who hold the most powerful opinions about contemporary culture are also the ones who stand to lose the most by voicing them. »Anonymonth« is an experiment designed to reduce the liability of expression for people in the public eye, and observe what may occur if they spoke freely. The first edition is concentrated on musicians, however it would be interesting to expand future experiments to other disciplines.

»Anonymonth« involves a very simple concept. Over the course of one month, a piece will be published daily on a specially dedicated website. Participating artists will privately select a number, and their piece will be published on the corresponding day of the month.

Neither I nor other participating artists or the public will know whose content is posted on what day. I will, however, publish all of the names of contributing artists alongside each anonymous post. This provides a combination of anonymity and association, invisibility and credibility. The public will not know who posted a particular article, however they will know that it is from a reputable source.

This project spawns from a concern that in a fragile musical economy, there is significant individual risk attached to levelling dissent towards an increasingly centralized and interconnected infrastructure of artists, labels, press, and cultural facilitators.

On the one hand, it is remarkable that in a time of such austerity there is still a thriving musical culture to speak of, but the solidarity integral to keeping this culture afloat also runs the risk of creating a consensus that may become increasingly difficult to challenge.

The radical hyperbole of music ought to be held under close scrutiny in 2014.

I am not alone in observing that in many ways, the music industry is petrified, literally and figuratively. The shapes and forms in which we privilege, critique, and distribute media doggedly resemble a more prosperous time, despite even generous predictions pointing to their demise. Most spend all of their time on the internet, and yet many of us treat Internet-native forms of expression with a skepticism that can border on reactionary.

One of the great privileges of an Internet era is the possibility of a multitude of effortlessly accessible competing narratives. It provides us with options to express ourselves quickly, cheaply, and in alacritous response to unfolding conditions, which was simply not possible with the release of physical media. The future stability of most independent practitioners in all aspects of musical culture is faced with growing uncertainty, compounded by the global financial crisis, and yet we persist in presenting a facade of confidence, neatly confined debate and trivial chatter. Perhaps we need to shed our identities to accelerate the discussion to where it needs to be.

Radical political units, from Wikileaks to Anonymous, have shown how a combination of dispersed network power and anonymity can be hugely influential in creating significant infrastructural awareness and change, and »Anonymonth« is an experiment to see what would happen if similar tactics were applied to the world of music. I have no idea what it will produce, however am resolute in the belief that experimental media ought not produce predictable results.

DIGITAL CULTURE IN THE AFTERGLOW

BY KRISTOFFER GANSING

For 15 years, transmediale, Berlin's festival for art and digital culture, and CTM have closely collaborated to present one of the world's largest annual platforms for reflection on the cultural significance of new technologies and digital culture. In this article, Kristoffer Gansing, transmediale's current Artistic Director, outlines how afterglow, the theme of the festival's 27th edition, can be understood as a diagnosis of the current status of post-digital culture, where media technologies and mediatic practices that were once treasure(d) are turning into trash.

[Kristoffer Gansing](#) is Artistic Director of the transmediale festival for art and digital culture, Berlin.
*** www.transmediale.de



Photos: Garbage dump in Phnom Penh. Photo by John Einar Sandvand, Cambodia Tales, Sandvand/Flickr (CC BY-NC-SA 2.0); Marina Bay Light and Water Show. Photo by William Chor/Flickr (CC BY-NC-SA 2.0) © Artwork by The Laboratory of Manuel Bürger

The Post-Digital Condition

In recent years, the term »post-digital« gained popularity for describing a new kind of critical media practice, through which a young generation of DIY artists and makers have been revisiting analogue production and distribution models such as Zines, analogue print, and photography. Most often, these types of practices are not happening completely outside of the digital but in increasingly hybrid form, such as in the post-digital publishing culture described by people like Alessandro Ludovico, where new and old co-exist and mutually feed each other. Furthermore, the post-digital »movement« can be seen as a response to and even a reaction against the perpetual utopianism and corporate high-gloss of mainstreamed digital culture. At the same time as the post-digital can be seen as a critical and artistic response of the so called »digital natives« towards their oversaturated technological environments however, there are signs that post-digital is becoming more like a »condition« applying to all forms of practice »after the digital«. Recently, major business personae such as Rene Obermann, the former CEO of Deutsche Telekom, have been using the term post-digital to describe a society in which the digital is not »sexy« by itself any longer but simply a kind of naturalized environment where innovation now has to happen on other terms than the purely technological. In this context, the transmediale festival asks how the post-digital can be »de-naturalized« and understood as being constructed through specific social, political, and economic conditions of a society now inescapably marked by the arguably revolutionary transformations of global digital network technologies.

Digital Culture in the Afterglow

The starting point of the 2014 transmediale festival is to consider the post-digital as an »afterglow« moment of the digital: afterglow being that moment of deep twilight when the dust that has risen from the earth into the atmosphere is temporarily lit up, as well as being a term that refers to the either positive or negative mental after effects of drug use. afterglow is meant to conjure the ambivalent state of digital culture, where what seems to remain from the so-called digital revolution is a futuristic nostalgia for the shiny high-tech it once promised us but that is now crumbling in our hands. The challenge that this moment poses is how to use that state of post-digital culture in between trash and treasure as a chance from which to invent new speculative practices. These should resist nostalgic or defeatist ideas, yet still use waste as a

starting point from which to deal with the burning issues of today. The afterglow is the moment after the digital revolution, which is now turning into dust as we struggle to find new pathways in the wastelands of its aftermath. In waking up from the »digital hangover«, we find ourselves in the midst of pressing issues such as the corrupt ecology of technological resources (minerals, metals, and e-waste), mass surveillance, excessive big data schemes, and the post-digital lives that these phenomena impact on a daily basis.

Taking the afterglow phenomenon as a metaphor for the present condition of digital culture, what is the »dust« that is still suspended inside its glossy surface and what can we discover within it or experience through it? The hypes of Big Data, Smart Cities, Gamification, Internet of Things, Fablabs... all tell of an increased disintegration of the divisions between culture, nature, and technology. At the same time, the discussion surrounding these phenomena is tied to the digital paradigm with its promotion of antiseptic, high-tech simplification of everyday life, and opportunities for all. But these hypes can also be seen from the perspective of their intimate connection to waste: in the way they promote excess, exploitation, and the wasting of resources of the material, human/animal, and mental world. In this sense, the digital has in fact always been a classic case where what is central to existence - trash and dust - is being pushed out to the margins. Similarly, the changing conditions for our online/offline existences form a perspective that twists the post-human discourse into one of bodies as the »trash of the machines«, and making everyday life into embodied transitions in between trash and treasure.

The irony is that today, it seems as if the digital itself is becoming the trash that refuses to go away. If the digital is becoming like the »dust« that is shining inside the twilight, we may bask a little in its beauty, but also urgently need to develop new vocabularies and practices that proactively rethink culture for the moment after. In line with the overall festival approach to the theme afterglow, the transmediale 2014 programme traces cultural transitions through the trash that now makes up our post-digital existence, in terms of its mediatic materials, subjects, and emerging politics.

The author wishes to thank Tatiana Bazzichelli for her contributions to this text as co-curator of the transmediale conference programme.

DIS-CONTINUITY & PRESENCE OF MIND

BY ANDREAS L. HOFBAUER

Andreas L. Hofbauer is a philosopher, psycho-historian, and author, and frequent contributor to CTM's discourse programme. In his various books and numerous published essays, he has recurrently addressed economic and social aspects of cognitive science. Translator of several books by Slavoj Žižek, and of certain works by Thomas De Quincey, Jeremy Bentham, Marshall Sahlins, Tom McCarthy, inter alia.

*** www.alhofbauer.wordpress.com



René Lückhardt, *Untitled*. Oil/Canvas. Private Collection

Miaowl

Marlene Dietrich as spy X 27, female composer and cryptographer, in Josef von Sternberg's film *Dishonored*

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Well... Right... I like my publishers. I also like the ancient Sophists. I always have. Especially Gorgias. Therefore, the answer could only be: Child's play (paignion)!

Rely on the legacy

When trying to understand what is happening *today*, apparently one has already accepted yesterday and tomorrow, whether willingly or otherwise. Here the historical experience is conveyed diplomatically (meaning two-facedly). It creates (a) future, which can be put to use at the present moment. These days, on the one hand, the proliferation of digital media has undoubtedly put forth an unexpected prevalence of externally accessible memory, while, on the other hand, the statement *There will be no revolution without memory* still remains valid. Where others have failed, and remained unnoticed in their time or were intentionally marginalized into oblivion, is placed in a new context. *Our grandchildren will fight the battle to a better conclusion [Die Enkel fechtens besser aus]* has been the watchword of hope since the German Peasants' Wars of the 16th century. What for the moment seems hopeless or like defeat will eventually become a bridgehead for the new frontier. But *today?* Under the premises of global capitalism and in the digitally networked sphere, in some places there is a certain resignation spreading *that nothing works and nothing ever will again*. Retromania, rapid standstill, the monotony of keeping on. It is exactly that keeping on with it, that continuity, which brings about destruction, said Brecht.⁽¹⁾ The basement cannot be cleared out before the anthologies have already piled up to the height of skyscrapers. And the sky is no longer scraped, just clouded and cluttered with trash. The blue of the sky and blue of noon - mercilessly obstructed. Permanent refreshing and updating seems to instantaneously enhance every status and each recorded date. A present so heavily loaded with memories dips as equally into the past as it does into the future. Although endless evolutionary variations are generated, the revolution remains denied, the sudden change [Um-schlag] does not occur. Even the scope of the ones who stuck to the gesture of the *to come* and tried to hold this against any positive stance or hope for an arrival or event in this world, gets narrower and narrower. This common disillusionment results from the fact that some decades ago there still existed an enthusiasm about immanence, contingency, arbitrariness, and referentiality, endless linking and so on, but nowadays this has all become ubiquitous and disappointingly uninspiring. The frenzy of associations leads to fatal isolation. Consensus reality results in early senescence. Everyone is reliably working away at his own legacy [Vorlass], writing himself into the accounting books, folios, and attendance records

of the present day, somewhere between consumer behaviour, blog entries, SoundCloud and YouTube contributions, and succinct political commentary. *Posthumous Papers of a Living Author* is what Robert Musil called it.

Everyone is an author, all are active, everyone is part of a grassroots movement, everyone participates. Even the actually manifested and violent struggles for recognition or regime change, civil wars, and wars against terror, document themselves on countless channels. Presidents give their orders via text message and watch in real-time as they appear to write history, while giving their opinions via the usual channels. The fact that it comes down to double-entry bookkeeping is the discreet task of the intelligence services.

Needs

And why should we be concerned with such a sudden change and its revolution, my dear friend? Who should care if it occurs, is on the rise, or if it was never even possible or effective in the first place? And anyway... What a pool, especially for the creative classes and the artists, who for all eternity have merely been quoting and copying, while making sure to cover their tracks as much as possible. Carping, nothing more. And on top of all this - time! The psychoanalyst will tell you something about logical time, religious scholars evoke impending doom [Frist], quantum physicists attempt to perform notable experiments, and tired historians of philosophy refer to Augustine, since whose time and whose line of questioning not much has actually changed.

May the scientists and technicians, the spoiled idlers in the garden of knowledge, the political advisors and Internet enthusiasts, and the relaxed archivists, look nobly down on our *rough and charmless needs and requirements*, and as Nietzsche already said - what the heck? If the weight of history has always been something that only the strong could bear, the supposedly intangible permanent state of now beyond the end of history requires a very special weightlifter.

More or less cheerful ways to escape the miseries

Like Saul, one is struck by lightning and becomes a whole new person, and changes his life (without actually inventing any new form of change). One can, for example, then become an orthodox Communist and represent iron hardness and zealous expectation. Let's call it the Badiou method.

One is hit on the head by an obscure object that falls from the sky, and then attempts to rediscover authenticity through endless re-enactments.⁽²⁾ Such projects can even be commercially and professionally assisted by a coach, but one should be careful not to identify with the clients too much. Let's call that one the Nazrul Ram Vyas method.

One becomes a victim of Alzheimer's disease or a massive head injury, or addresses similar case studies of the psychological ontology of cerebral unconscious: The Malabou method.

One becomes a junior professor of archival science in a cluster of excellence. An academic method.

Through the mediation of obscure geoscientists, one meets Cthulhu and Pazuzu (or their shadows or corpses respectively) in the ruins of a Syrian city, imagines unholy sexual acts with them – of course without any erotic engagement – and then gives birth to himself as a Speculative Realist. Also a recently increasing academic method. Maybe even a theological one.

Objects and a little bit of history repeatin' (or maybe not)

The New always seems to appear after a fracture (at least since God Himself spoke *Anochi* on Mount Sinai), and then becomes a continuum and is in turn replaced in the next fracture by the next New. At times, precursors to a fracture are identified and stated, and may even be repeated. They do not remain the same, but they return. In any case, the New seems to be not quite as new as it would like to appear.

If one looks around, one is confronted with a strange illusion. The historians tried to portray the historic event as it *actually* happened (Ranke). But the fact that nothing actually happened was just obvious objection and correction. Much more important, however, was that object and artifact – the evidentiary materials of historical research, so to speak – fell behind. Relationship contexts, correlation networks, political and economic field definitions, and structural reference systems increasingly replaced any actual meaning of the object itself. Crypts and mummies, fetish objects and jewels, were deciphered not only in Hergé's comic albums as carriers of messages, and therefore ultimately became superfluous as material. Old and dirty gods end up in museum display cases, to be walked around and stared at, or on the assembly lines of their mass reproduction and mass distribution.

But is it so? Isn't it all about the object, which fascinates me and will not let go? Is it not the object that constantly eludes me? The objects (among which – as soon should be apparent – one may also include subjects), but also the correlations and the trail of references, insist upon something that goes beyond the two-sided concept of possibility and reality. There is not just an artifact, which on one side imposes itself or is isolated, and the deformation or informing of that artifact through our social structures or our discursive processes on the other. Objects, through their insistence as *mental objects* (tonal vibrating in the broadest sense), always remain transmitters of messages. Yet, for the most part, the transmitters do not know what they are transmitting (and that is also not to say that only a human mind can be implied when referring to transmitters), but also the recipients do not have the means to answer the question of what these transmitters want from them or what they mean to say. *Does it take (a) place? and What does the Other want, and want specifically of me?* are consequently not questions that can be answered, but that are answered for. Here it is not about bridging the gap between event and experience, but about enduring this discrepancy and leaving it open.

When assuming that both message and object are superfluous for history, as they are nothing more than functional agents, we come across a hidden idealism, which also happens to be very German: »Characteristic of German idealism, both in theology and in epistemology, is the apotheosis of movement over reality, function over substance, power over matter. [...] Change and history

become fundamental attributes of the divine, and divinity is subject to the general fate of the time. Although both Fichte and Hegel have pointed out that the movement of divinity, which they describe, is not a movement in time, but has a »logical character«, it remains obvious that such movement cannot manifest itself in any other way than in time...«⁽³⁾ Yet there, where any substance can be converted into a function, some enthusiastically welcome the greatest of all achievements. We, however, see it as a crisis, which is by no means merely one of humanity.

Fine slices, microphones, and garments

The relationship between fracture and time, fracture and duration, dis-continuity and continuity, should be considered from a different perspective. Thus, we argue that by contemplating the materiality and affectivity of a mental object, temporal stasis (and stasis means both »standstill« as well as »turmoil and civil war«!) loses its high standards. Especially in the interplay between image and sound, it can be very well demonstrated that in a state of dis-continuity, fracture (there) and duration (gone) are not mutually exclusive, but are stitched together. Regarding the relationship between sound and film, Michel Chion speaks of in-discontinuity: A neologism of double negation which intends to show how continuity can be represented through interruption or variability – particularly with regard to the vectorizing soundtrack.⁽⁴⁾ Bill Viola additionally states for the video image in general: »Technologically, video has evolved out of sound (the electromagnetic), and its close association with cinema is misleading since film and its grandparent, the photographic process, are members of a completely different branch of the genealogical tree (the mechanical/chemical). The video camera, being an electronic transducer of physical energy into electrical impulses, bears a closer original relation to the microphone than it does to the film camera.« For this reason, through cuts in time, the flowing fabric of tonality becomes a kairotic⁽⁵⁾ and rhythmic garment for the image. »The fabric of all video images, moving or still, is the activated constantly sweeping electron beam – the steady stream of electrical impulses coming from the camera or video recorder driving it. The divisions into lines and frames are solely divisions in time, the opening and closing of temporal windows that demarcate periods of activity within the flowing stream of electrons. Thus, the video image is a living dynamic energy field, a vibration appearing solid only because it exceeds our ability to discern such fine slices of time.«⁽⁶⁾

But what is meant here by »exceeds our ability«? Is this not more of a resemblance? Ultimately, no subject is ever in the now, because the time of the ego is diachronic, but its speech is itself interrupted by an opening and closing of the unconscious. The time for understanding forms a loop that is retroactively effective, and is continuously broken and crossed. Here, the imagination is a broken frame, a split fantasy frame, but at the same time fantasy screen. The imagination does not convey the strangeness of the world, but attaches itself to objects in order to deal with them: A strangeness that is shared with others, a realization, a present that is always already a shared present. From this perspective, the term presence of mind takes on a whole new meaning. Because it is never naked or new, never merely a ghost or a revenant, variation (of something), or apocalypse or advent.

Pioneers

Presence of mind is answering to an embodied knowledge [Körperwissen]. »The way into the body of knowledge, into the wisdom of the earth, is a secret passage. It runs underground. One can only enter step-by-step, and only under the premises that each respective step provides. No chance for high-flyers.«⁽⁷⁾

The rejection of the carefully tentative approach in favour of increasing acceleration – *full speed ahead* – into catastrophe is therefore to be distrusted to the highest degree. Whether theoretical fracture pilots or kamikazes, the recently emerging apocalyptic and nihilistic tone in philosophy leads only to ... deserts. Incidentally, the gesture of such nihilistic acceleration, which is meant to address the problems of the 21st century in face of the failure of bourgeois liberalism and Marxism, is the new edition and recurrence of what Armin Mohler already described in 1950 as the basic feature of the »conservative revolution« that began in 1918⁽⁸⁾. This is not without a certain irony in many ways.

The sense of unbridled fun inevitably runs out for the medial enthusiast, and if not, then you should still give him a consoling pat on the shoulder

And the pioneer? The pioneer ultimately relies on his entrenchments. He digs, remains faithful to the earth, because he trusts in his steps, his feet, and the walk [Gang]. He has not forgotten how to walk, also to walk away, and how to deal with things [Umgang]⁽⁹⁾. He builds no wall [Wand], but sews his garment [Gewand]. Therefore, he need not constantly record everything, present it, and document it. It should be additionally noted at this point that Bill Drummond is without a doubt also a pioneer, and »The17« a pioneering achievement.

A colossal New England landscape painting destroyed by flashlight

In an extra short play – which, by the way, was never performed on-stage, no recording of which was ever released, and that was never broadcast as a radio play, but was printed and can fortunately still be read – H.P. Lovecraft, Esq. meets the artist Pickman, who happens to be carrying home one of his huge paintings from the Federal Art Club, from which he has just been expelled. Even before the curious Lovecraft can view the picture more closely in the light of a flashlight, it begins to dissolve and melt with slurping sounds. Under the light of the lamp, it rapidly becomes smaller and smaller, then disappears.

pickman : *schauernd*

: es hat seinen bruder geholt, lovecraft ..

lovecraft : und ohne diese gute taschenlampe hätte es auch uns und die ganze menschliche rasse geholt ..

kutlyoo : *von ganz ferne, fast schon aus einer anderen welt*
urghll urghll rhyll niarhchll edison edison onkthpht onkthpht!⁽¹⁰⁾

In contrast to the ironic title, »Lovecraft saved the world«, and in view of the two more or less frightened gentlemen, we draw the equally ironic conclusion that too much portable electrification is unhealthy. Painting Cthulhu and other all-consuming forces on the wall, however, is no way out (and certainly not for Cthulhu). There-

fore: Don't make it perfect, and definitely not so much that the Academy will like it, maintain contact with the most remote, remain vulnerable and true to your idiosyncrasies, keep digging, learn non-European languages.

This leads us less to a conclusion, but rather to the beginning. So is there a lucky [geglückter] – and let's not forget that the German word Glück [luck] recirculates etymologically to Lücke [gap] – way to be contained in the present, like a number without any awkward leftover fraction?⁽¹¹⁾ And how, if it is not an animal that lives like this, but...? What presence of mind would be necessary for such a life? And what kind would be needed in order to avoid such a life?

It also follows: merrier possibilities in the face of the situation

A taste for symbols (Johann Georg Hamann) is required. Hermetic painters of the colossal and composers of the syncope. Poetesses and female cryptographers. Children's playgrounds. A recession-al priesthood of Atropos⁽¹²⁾. Manufacturers of refined tobacco and good tailors. Untimely contemporaries and cheerful tropes.

It's that simple.

Translated from the German by Alex Paulick-Thiel.

*1) See Heiner Müller, Fatzer ± Keuner, in: *Heiner Müller Material. Texte und Kommentare*, Leipzig: Reclam, 1989, p. 32.

*2) cf. in this context the extraordinary and brilliant novel *Remainder* (Richmond/Surrey 2006) by Tom McCarthy.

*3) Jacob Taubes, *Dialektik und Analogie*, in: same author, *Vom Kult zur Kultur*, München: Wilhelm Fink, 1996, p. 207 f.

*4) cf. Michel Chion, *Audio-Vision*, Berlin 2012, pp. 176-179.

*5) That the kairos can be thought of as a »lucky moment« has its origin in the fact that it largely replaced the adverb *harmoi* («at the appropriate time»). This derives from *harmos* – fugue, gap, joint. *Kairos* itself became a common word because it practically and figuratively suggests how to use this gap: When weaving welt and warp, or killing with a spear, when one penetrates through the gap in the armor of the opponent (usually at joints). For the relationship of tonality to the kairotic and further etymology see Andreas Leopold Hofbauer, *Diverse Verbindlichkeiten*, Wien: Passagen, 1998, pp. 211-260; and on *kairotic instantisation* the contribution by Wolfgang Ernst in this volume.

*6) See Bill Viola, *The Sound of One Line Scanning*, online text, www.iemed.org/publicacions/quaders/12/The_Sound_of_One_Line_Scanning_Bill_Viola.pdf.

*7) Dietmar Kamper quoted in Siegfried Zielinski, [... nach den Medien]: *Nachrichten vom ausgehenden zwanzigsten Jahrhundert*, Berlin: Merve, 2011, p. 101.

*8) cf. Armin Mohler, *Die konservative Revolution in Deutschland 1918-32*, Darmstadt: Wissenschaftliche Buchgesellschaft, 1994 (4th edition), especially p. 97 and 111.

*9) We speak in this context, therefore, not of *kósmos* but of *kómoi*, the drunken, sounding and singing processions which are older than the Dionysia.

*10) Hans Carl Artmann, how lovecraft saved the world, in: same author, *Die Fahrt zur Insel Nantucket*. Theater, Neuwied and Berlin: Luchterhand, 1969, p. 418.

Translated as:
pickman: *shuddering*
it's got it's brother, lovecraft...
and without this trusty flashlight it would have gotten us and the entire human race...
lovecraft:
and without this trusty flashlight it would have gotten us and the entire human race...
kutlyoo:
from far, almost from another world
urghll urghll rhyll niarhchll edison edison onkthpht onkthpht!

*11) See Friedrich Nietzsche, *On the Uses and Disadvantages of History for Life* (2nd Untimely Meditation), transl. by R. J. Hollingdale, Cambridge: Cambridge University Press, 1997, p. 61.

*12) Atropos is the third of the Fates, the one that cuts the thread.



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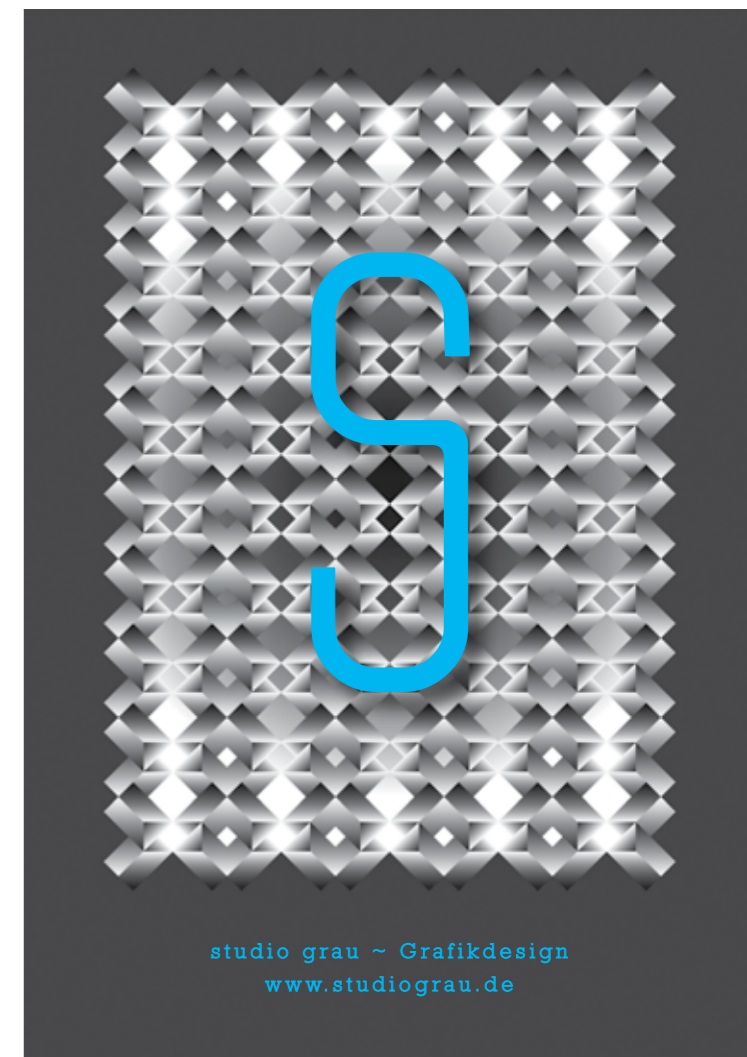
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EDITORS

Jan Rohlf, Taica Replansky, Katerina Leinhart, Bianca Ludewig

CONTRIBUTORS

Andreas L. Hofbauer, Andrey Smirnov & Liubov Pchelkina, Annie Goh, Antye Greie-Ripatti, Bianca Ludewig, Björn Gottstein, Chris Salter, Florian Sievers, Frans Evers, Henning Lahmann, Hillegonda C Rietveld, Ion Dumitrescu, Jan Rohlf, Jennifer Lucy Allan, Johan Palme, Katerina Leinhart, Konstantin Dudakov-Kashuro, Kristoffer Gansing, Mat Dryhurst, Marcus Boon, Michael Duffield, Michael van Hoogenhuyze, Paul Purgas, Peter Kirn, Robert Mießner, Thibault de Ruyter, Tim Terpstra & Guy Tavares, Ultrahang Festival, Wolfgang Ernst

TRANSLATION

Jill Denton, Alexander Paulick-Thiel, Catherine Genest

GRAPHIC DESIGN

Marius Rehmet (studio grau)

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CTM 2014 TEAM

PROGRAMME CURATORS & FESTIVAL DIRECTION

Oliver Baurhenn, Jan Rohlf, Remco Schuurbijs

ADDITIONAL CURATORS MUSIC & DISCOURSE PROGRAMME

Michail Stangl, Annie Goh

CURATOR GENERATION Z : RENOISE EXHIBITION

Andrey Smirnov, Liubov Pchelkina, Konstantin Dudakov-Kashuro, Peter Aidu, Evgenia Vorobyeva

MUSICMAKERS HACKLAB

Peter Kirn & Darsha Hewitt

CURATORIAL CONTRIBUTORS

Bill Kouligas, Peter Rehberg, François Bonnet, Mats Lindström, Kees Tazelaar, Carsten Stabenow, Carsten Seiffarth, Gideon Rathenow, Mika Taanila, Mikko Ojanen

FINANCE & ADMINISTRATION, PROJECT COORDINATION

Karen Grzempa

FESTIVAL MANAGERS

Benjamin Straub, Philip Gann

COMMUNICATIONS & PR, FUNDRAISING

Taica Replansky

GUEST MANAGEMENT & SPONSORSHIPS

Zuri Maria Daiß

VOLUNTEER COORDINATOR

Anja Henkel

ECAS CULTURAL WORKER IN RESIDENCE

Mathias Holmberg

FESTIVAL ASSISTANTS

Veit Gebhardt, Katerina Leinhart, Constantin Rücker, Isabella Waszina, Laura Aha, Bianca Ludewig

TECHNICAL DIRECTION

Anke Eckhart

TECHNICIANS

Elisabeth Enke, Ron Knape, Frank Marr, Dirk Mielenhausen, Special thanks to our SAE volunteers

PRESS OFFICE

Guido Moebius

GRAPHIC DESIGN

Marius Rehmet, Inga Israel (studio grau)

VIDEO TRAILER

Oliver Thomas, Marius Rehmet (studio grau)

EXHIBITION DESIGN

Raumlabor Berlin

WEB DESIGN

Ian Warner, Tim Boeken (Blotto)

WEB PROGRAMMING

Stefan Schreck (Featureladen)

EDITORS WEBSITE, SOCIAL MEDIA

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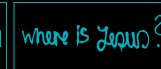
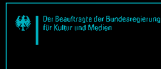
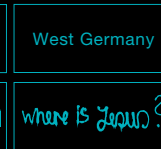
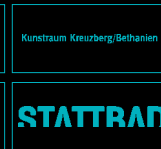
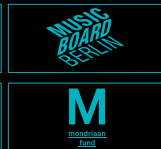
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