

Curatorial > PROBES

With this section, RWM continues a line of programmes devoted to exploring the complex map of sound art from different points of view organised in curatorial series.

PROBES takes Marshall McLuhan's conceptual contrapositions as a starting point to analyse and expose the search for a new sonic language made urgent after the collapse of tonality in the twentieth century. The series looks at the many probes and experiments that were launched in the last century in search of new musical resources, and a new aesthetic; for ways to make music adequate to a world transformed by disorientating technologies.

Curated by Chris Cutler

PDF Contents:

- 01. Musical references
- 02. Notes
- 03. Links
- 04. Credits and acknowledgments
- 05. Copyright note

At the start of the seventies, Chris Cutler co-founded The Ottawa Music Company – a 22-piece Rock composer's orchestra – before joining British experimental group Henry Cow with whom he toured, recorded and worked in dance and theatre projects for the next eight years. Subsequently he co-founded a series of mixed national groups: Art Bears, News from Babel, Cassiber, The (ec) Nudes, The Science Group and p53 and was a permanent member of American bands Pere Ubu, Hail and The Wooden Birds. Outside a succession of special projects for stage, theatre, film and radio he still works regularly with Fred Frith, Zeena Parkins, Jon Rose, Tim Hodgkinson, David Thomas, Peter Blegvad, Daan Vandewalle, Ikue Mori, Lotte Anker, Stevan Tickmayer, Annie Gosfield and spectralists Iancu Dumitrescu and Ana Maria Avram. He is a permanent member of The Bad Boys (Cage, Stockhausen, Fluxus...), The Artaud Beats and The Artbears Songbook. Adjacent projects include commissioned works for radio, various live movie soundtracks, *Signe de Trois* for surround-sound projection, the daily year-long soundscape project *Out of the Blue Radio* (for Resonance FM) and p53 for Orchestra and Soloists.

He founded and runs the independent label ReR Megacorp and the art distribution service Gallery and Academic, is editor of the occasional sourcebook *Unfiled*, author of the book *File Under Popular* – and many articles and papers published in 16 languages. He was on faculty for a while at the Museum School in Boston and lectures irregularly on theoretical and music related topics worldwide. He has appeared on over 160 recordings.
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PROBES #32.2

Auxiliaries

The PROBES Auxiliaries collect materials related to each episode that try to give a broader – and more immediate – impression of the field. They are a scan, not a deep listening vehicle; an indication of what further investigation might uncover and, for that reason, most are edited snapshots of longer pieces. We have tried to light the corners as well as the central arena, and to not privilege so-called serious over so-called popular genres. In this new episode, we'll find the Theremin at work in art ensembles, symphony orchestras, a jazz group, rock bands and on film and television scores – both alone and in quantity –, and there's a rare sighting of Nikolai Obukhov's *Croix Sonore* from his extraordinary Third and Last Testament.

01. Musical references

[00:00 Gregorio Paniagua, 'Anakrousis', 1978]

[00:07 François Baschet BBC Radio talk (excerpts), 1963]

François Baschet speaks to the late and great Huw Wheldon on BBC radio in 1963.

[02:46 Bart Hopkin, 'Suction Pops' (excerpts), 2017]

Bart trained as an ethnomusicologist and, between 1985 and 1999 ran the legendary quarterly journal *Experimental Musical Instruments* – which quickly became the focal point for a vast community of inventors and experimental instrument builders. He has also published several books on the topic, taxonomical and practical, as well as building and playing a wide variety of instruments himself. The suction pops instrument works by inserting plungers into tubes and pulling them out quickly. There's a score or so of tubes and the playing action is necessarily slow.

[03:50 Harry Partch, 'A Dream' (excerpt), 1932]

Composed between 1931 and 1933, the *17 Lyrics of Li Po* are amongst Partch's earliest extant compositions and were scored for 'intoning voice and adapted *viola* – a hybrid instrument that consisted of a cello neck mounted on a viola body, the open strings of which were tuned one octave below a standard violin. Li Po (701-763) is universally recognised as one of the greatest Chinese poets of the Tang period. In 'A Dream', the poet visits Mount Tianmu.

[05:05 Anarchestra, 'Batur' (excerpt), 2014]

Alex Ferris played guitar in bands, took up the saxophone, played some jazz, studied twentieth century composition, joined a punk group and, at the turn of the millennium, settled into his work on the instruments that became the Anarchestra – about two hundred of them now, very elaborate, very sculptural, mostly made of steel strips and pipework and set to work in a variety of situations, often, like the later Baschet brothers, involving non-specialists. His motivations, he said, were 'to encourage non-musicians to explore the making of sound and to allow experienced musicians to make sound unconstricted by their technical habits and preconceptions. And to provide an alternative vocabulary of musical sounds.'

[06:16 Ela Lamblin, Leah Mann, 'Twilight' (excerpt), 2000]

[06:44 Ela Lamblin, Leah Mann, 'Cosmogogenesis' (excerpt), 2000]

The Seattle-based composer and inventor Ela Lamblin works mainly in theatre with her partner and choreographer Leah Mann. These tracks are performed on the Rumatone – a slowly revolving circle of differently-lengthed metal tubes that are played with superball mallets or bows by two choreographed performers revolving with the tubes inside the ring. Following Harry Partch they say: 'Physical Music is the complete integration of music and movement: the choreography,



[Examples of the Anarchestra instruments by Alex Ferris]

instead of being performed to a musical score, as is traditionally the case, arises entirely from the performers playing the instruments, which are designed specifically to evoke such movement.'

[08:06 Tim Hawkinson, 'Überorgan' (excerpt), 2000]

Los Angeles-based artist Tim Hawkinson's work is mainly sculptural, and comes in all sizes. His installation, 'Überorgan', which must qualify as one of largest indoor sculptures ever created is, in essence a stadium-sized, fully automated bagpipe, player piano and pipe organ hybrid, that consists of thirteen bus-sized inflated bags, one for each of the twelve tones of the musical scale, with one udder-shaped bag that feeds air to the other twelve through long tubular ducts. It's operated by a 250 foot long scroll marked with black dots and dashes encoding the notes of traditional hymns, pop songs and improvisational tunes; these marks trigger light-sensitive switches which open valves in the corresponding reed assembly, forcing air through a 25 foot resonator pipe to produce a blast of sound. It's site specific and is reconfigured for every installation.

[10:58 Bart Hopkin, 'The Cheshire Grin' (excerpt), 2002]

The main instrument here is the Bentwood Chalumeau, a single-reed, cylindrical-bore quasi-clarinet with a long slit running lengthwise along the top, which the player partially closes with a flexible, curved, piece of wood. The bowed string instrument is a Tailpieces – more or less a long zither, with an arched soundboard, like a koto, that has sticks connected to springs anchoring the strings at one end, making it easy to bend the pitch. The bass is a fretted string-bass, smaller than a contrabass. There's also a branching corrugaphone – that's a set of ridged brass tubes mounted in a plastic bottle; you blow into the bottle with the tops of the tubes closed with your fingers, lifting a finger to make a note. The fine metallic sounds are zing trees – built by another prolific inventor, Tom Nunn – which are lengths of brass rod, braced onto a resonating metal surface and resting on balloons (Baschet guitar style) – for maximum resonance, and then bent into contorted shapes. You'll also hear various percussion instruments.

[10:41 Philip Dadson, 'Sprongs solo' (excerpt), 2007]

Another of the quiet heroes toiling in the vineyard, the New Zealand inventor and composer Philip Dadson, who we've met already in PROBES #27 and #29, is an innovator on a Partchian scale – and woefully under-represented outside his own backyard – with whole families of different instruments and many substantial and impressive compositions under his belt. He was the founder of From Scratch (a nod to his time of tenure in the Scratch Orchestra in the seventies), and creator of Akau Tangi, a wind powered sculpture, in Wellington. Look for his videos on Vimeo.

[11:44 Diego Stocco, an introduction to the Custom Built Orchestra, date unknown]

Diego Stocco is an Italian composer and sound designer, now resident in Los Angeles, who works mainly on film, television and video game soundtracks (he'll have been responsible for many trailers that you're bound to have seen). And he's the inventor of an extensive number of original instruments. This showcases a number of them assembled into the Custom built Orchestra, comprising:

- Experiviolin, body of a violin, neck of an electric guitar and two gut strings.
- Expericello, the majority of the top body removed to insert a zither; the neck - custom built, fitted with two double bass strings and two piano strings.
- Experibass, combines a violin a viola and a cello neck, on the body of a double-bass.
- Arcophonico, a tree branch with a fretted metal neck, three strings and played with chopsticks, metal bars or bowed.
- Luminopiano, based on light-bulbs, sound created by tungsten filaments, each bulb has a microphone inside it; the sound determined by size and shape of the filament.
- Textural flute, combines a penny whistle, plastic pipes and the bell of a trombone, produces mostly overtones.
- Glockenstrange, old autopiano, custom-tuned.
- Sub bass column, thick elastic cords for bell-like tones.
- Tonal metals, a metallic spatula, a long metallic bar, two cutlery containers and dryers, a fruit plate and clock bells.
- Double frame drum: lower tone than regular frame drum, and can be filled with water.
- Piano-frame.



[Philip Dadson's Atau Tangi, wind powered instruments/installation]

[13:48 Hans Reichel, 'Hi', 'Panne Lieb' (excerpts), 1992]

The great Hans Reichel again, composer, improviser, instrument builder and master of unorthodox techniques playing multiple variants of the Daxophone.

[14:53 Bill King, 'The Reverend's Retort', 1991]

A supporter of improvised and experimental music and a generous concert organiser, Bill, inspired by Bart Hopkin, also built some instruments of his own, and played sometimes with his performing guests at concerts. This piece, recorded for a Rastascan compendium, (*Yearbook Volume 1*, featured 'the board' – an eight-foot hardwood beam with fourteen seven-foot strings and two electromagnetic pickups at one end. For 'The Reverend's Retort', the strings were made very slack and plucked with the right hand.

[15:49 Bart Hopkin, 'Use Me' (excerpt), 2002]

The famous vamp from Bill Withers' eponymous song is here played on a set of Bart's membrane reeds – these are tubes – in this case from one to eight feet long – each of which produces a single note by way of a membrane stretched over one end, which is set so that the air blown into it is forced to squeeze under the rim of the membrane in order to enter the tube. The lead melody is taken by scraper flutes – a tuned set of plastic pipes supported on a wooden frame, each pipe engraved with ridges, which the player scrapes with a metal rod in order to elicit sounds. The strings are a twist-string harp – a small nylon strung harp with a styrofoam ice chest to serve as a sound-radiator. The bass is an almost standard electric bass, with a magnetic pick-up pressed directly onto the strings. Also heard are various percussion instruments, including a colander – vibrating prongs, constructed on the principle of the kalimba.

[16:35 The violimba (demonstration), 2009]

Invented by the American kalimba-maker David Bellinger, the violimba consists of two long metal blades mounted on a hollow box, and is played with a bow.

[17:35 Diego Stocco, 'Entering the Dark Area' (excerpt), 2010ish]

Featuring the Experibass (see above).

[18:42 Les Phones, 'La Danse des Fourmis' (excerpt), 1985-1995]

A Belgian ensemble, whose main instrument is the Stiltophone – a pair of musical stilts. Each stilt has two flutes of different lengths attached – which might be up to three meters long – and a spring-loaded pneumatic system that blows air across the sounding edge when compressed. To play, the performers have get on the stilts and jump around – because the release of air is determined by a combination of gravity and velocity. The flutes have no tone-holes, but each, like any tube, can produce seven harmonics, depending on the force of the movement. So, to play them properly you have to jump with some precision. The recording starts with a Pongophone – which is a horizontal table of glass or metal bars which the band use as a ping-pong table. After that you'll hear the Stiltophones.

[19:51 Bart Hopkin, 2018]

I asked Bart to ponder on why people invent new instruments.

[21:32 Max Eastley, 'Elastic Aerophone/Centriphone' (excerpt), 1975]

From the LP *New and Rediscovered Musical Instruments*, on which David Toop and Max play a variety of invented instruments, on this excerpt are the aerophone – a latex installation on Dartmoor and the Centriphone, 'a sculptural sound system that I devised in 1972. It consisted of a motor running at 2,500 RPM and a voltage control to change the speed. Attached to the motor was thread of nylon fixed to the spindle of the motor and ending in rod of 4mm steel which tapped rapidly on a steel plate. I either used an air microphone or a magnetic coil pickup similar to those used for electric guitars underneath the steel plate. It was recorded by me using a TEAC stereo tape recorder.'

[22:51 Jacques Dudon, 'Naiades' (excerpt), 1983]

French just intonation composer and prolific instrument-builder Jacques Dudon with his Aquavina – which is like a lap steel with a fretted neck and often played with a slide – or plucked – but is here bowed. The critical innovation is that the body – a metal bowl – has water in it, which – like a Waterphone – creates shifting resonances.



[Tim Hawkinson's Überorgan installation]

[23:33 Harry Partch, 'Delusion of the Fury' (excerpts), 1964]

[24:47 Music for Homemade instruments, 'Inside the Compound', 1989]

In the seventies multi-instrumentalist Skip La Plante was studying at Princeton and beginning to earn a living as a dance accompanist. Circumstances put him in front of a lot of junk and he began to use this in his dance work. In 1975, with a fellow student, Carole Weber, he co-founded Music for Homemade instruments, which did a lot of theatre work and made several records. This is from *A Decade of Debris*, made in 1989. Nice polyrhythms near the end, there.

[26:04 Sauter-Finegan Orchestra, 'Sunshine Girl', 1958]

A very late American swing band, formed in 1952 by experienced arrangers Eddie Sauter, who'd studied at the Juilliard, and Bill Finegan – educated at the Paris Conservatory. Eccentric in their arrangements and their habitual use of unusual instruments, they made a lot of quietly unusual records in the five years of their existence, confounding classification. Lo-highbrow. This is from *Straight Down the Middle*, released in 1958, and features massed kazoos.

[27:06 Viola Organista made by Sawomir Zubrzycki (excerpt), 2015]

The Viola Organista – a kind of keyboard instrument in which the strings are played, like a hurdy gurdy, with a friction belt or wheel – was designed by Leonardo da Vinci – appearing in his notebooks of 1488-1489 and again thereafter. It's not known whether one was actually built at the time, but most authorities think not. Variations on the idea have, however, been built several times over the centuries, the oldest surviving example of which is Raimundo Truchado's, built in Toledo in 1625. He was almost certainly unaware of Leonardo's design. The first known was by inventor Hans Heyden, in 1575 and our old friend Michael Praetorius included a woodcut of one in his *Syntagma Musicum* (1614–20), which he calls a *Nürnbergisch Geigenwerk*; so the idea was clearly in the air. It's a semi-automated bowed piano, so pretty obvious. The version heard here was made by the Polish pianist Sławomir Zubrzycki, who premiered it (accompanied by a lot of inaccurate hype) in Kraków in 2013.

[28:22 Wintergatan, 'Marble Machine' (excerpt), 2016]

This is one of those baffling inventor-can't-help-it... why would you do that? – and at the same time deeply impressive (if scary) – manifestations of human single-mindedness that you can only tip your hat to. Wintergatan is a Swedish folktronica quartet from Gothenburg who use a variety of unconventional instruments, including theremin, autoharp, hammered dulcimer, music box, saw, typewriter and various electronic devices. Martin Molin is their vibraphonist and between 2014 and 2016 he uploaded videos in which he documents the construction of an automated device that uses 2000 marbles to play various instruments, perfectly synchronised into musical form. A hand-crank raises the marbles so that gravity can pull them down through multiple tubes to strike various instruments (vibraphone, bass guitar, cymbal and contact microphone/pad/drums) with perfectly orchestrated precision. The score is stored on two programmable wheels. This recording was made in 2016 – and it's a case where you should just watch the video; seeing is believing:

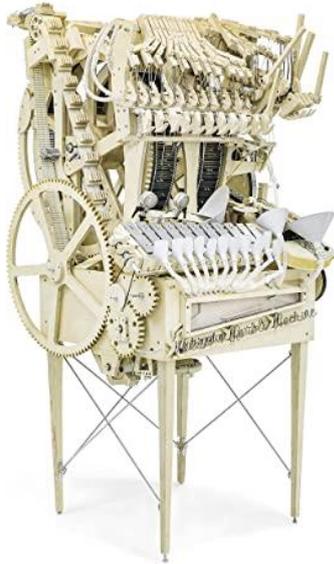
<https://www.youtube.com/watch?v=lvUU8joBb1Q&t=8s>.

[29:52 Gregorio Paniagua, 'Anakrousis', 1978]

02. Notes

On length and edits.

The purpose of these programmes is to give some practical impression of the probes we discuss. This necessitates for the most part extracting short stretches of music from longer wholes, which, of course, compromises the integrity and disrupts the context inherent in the original works. I have also, on occasion, edited different sections of a longer work together, better to illustrate the points under discussion. So the examples played in the programmes should not be confused with the works themselves. Wherever the word 'excerpt' appears after a title in the programme transcript, this indicates that what follows is an illustration, not a composition as it was conceived or intended. If something catches your ear, please do go back to the source.



[Wintergatan's Marble Machine]

For your listening pleasure I have, as always, been cavalier in editing the tracks together, overlapping them, making sometimes hard-to-spot joins, etc. – so, for the sake of clarity, I have prefaced each track with its start time.

Notification

If you want to be notified when a new probe goes up, please mail remmegacorp@dial.pipex.com with subject: Probe Me.

03. Links

baschet.org/site
barthopkin.com/instrumentarium
www.harrypartch.com
anarchestra.wordpress.com
lellevision.com
art21.org/read/tim-hawkinson-uberorgan
www.diegostocco.com
www.daxo.de
vimeo.com/29293660
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www.ekalimba.com
www.maxeastley.co.uk
obuchi.music.coocan.jp/index-e.htm
www.violaorganista.com/en/slalomir_zubrzycki/biography
www.youtube.com/watch?v=lvUU8joBb1Q&t=8s

04. Credits and acknowledgments

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