



## Curatorial > PROBES

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

Curated by Chris Cutler, **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

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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, p53 and The Science Group, 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 consistently in successive projects 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 &c.) The Artaud Beats and The Artbears Songbook, and turns up with the usual suspects in all the usual improvising contexts. As a soloist he has toured the world with his extended, electrified, kit.

Adjacent projects include commissioned works for radio, various live movie soundtracks, *Signe de Trois* for surround-sound projection, the daily year-long soundscape series *Out of the Blue Radio* for Resonance FM, and p53 for Orchestra and Soloists.

He also founded and runs the independent label ReR Megacorp and the art distribution service Gallery and Academic and is author of the theoretical collection *File Under Popular* – as well as of numerous articles and papers published in 16 languages. [www.ccutler.com/ccutler](http://www.ccutler.com/ccutler)

# PROBES #10

In the late nineteenth century two facts conspired to change the face of music: the collapse of common-practice tonality (which overturned the certainties underpinning the world of art music), and the invention of a revolutionary new form of memory, sound recording (which redefined and greatly empowered the world of popular music). A tidal wave of probes and experiments into new musical resources and new organisational practices ploughed through both disciplines, bringing parts of each onto shared terrain before rolling on to underpin a new aesthetics able to follow sound and its manipulations beyond the narrow confines of 'music'. This series tries analytically to trace and explain these developments, and to show how, and why, both musical and post-musical genres take the forms they do. **PROBES #10** is the first of two programmes that trace probes into the limits and extended use of the human voice.

## 01. Transcript. Studio version

[Gregorio Paniagua, 'Anakrousis', 1978]

[Aleksei Kruchenykh, 'Poem 14' (*Zaum*); Humphrey Bogart film soundtrack; Vladimir Kasyanov futurist tango; Ella Fitzgerald, 'One Note Samba' scat; Marlene Dietrich, 'Falling in Love Again'; Gregorian chant; and Schubert 'Der Leiermann', 24th Lieder' from *Die Winterreise*. Collage: Cutler and Drake, 2013]

Two uniquely human language systems – the verbal and the musical – meet in the voice, and it's in the character of the negotiation between linguistic and other – more abstract – systems of signification that the various genres of the vocal arts are to be distinguished. Where Gregorian chant – for instance – and epic rhapsody take great pains to privilege their texts, opera – and classical lieder – seem perfectly happy to sacrifice verbal comprehension for enhanced musicality. Similarly, scat singing and concrete poetry seem happily to dispense with verbal content, while prosody and classical theatre give little thought to musicality.

[Ian McKellen, from an actors masterclass on *Macbeth* (excerpt), 1979]

It was only in the second half of the twentieth century that a third, more intimate, layer of vocal signification found its way into the sonic arts. Pre-linguistic and unmusical, by any standards – these were sounds that had always been alien to the arts, not least because for the most part they were involuntary. I think of sounds like sobbing, screaming, laughing, sneezing, gurgling, belching, howling; sounds intimate to the body – or squeezed out of it by physical exertion. Then there are the feral, animal and mimetic sounds, and sounds that are simply possible to make, but have no animal or human contexts.

[Roy Hart, 'Chorded and Primaeval' (excerpt), 1964]

All in all, it has been a busy century for the human voice.

[Filippo Tommaso Marinetti, 'La Battaglia di Adrianopoli' (excerpt), 1926]

In around 1910, the Italian Futurists began to drag their poetry toward music and their music toward noise; in the process they sent the voice out into uncharted territories. In Tzarist Russia, the *Zaum* poets took similar steps and in Zurich a few years later, the Dadaists went further still, in particular the Merz collagist Kurt Schwitters, whose meticulously composed *Ursonate* is still held up as a supreme example of the form. A substantial composition in four movements, the *Ursonate*, is about 30 minutes long. And by extraordinarily good luck, South German Radio had Schwitters record a substantial chunk of it in 1932, so for once we don't have to speculate about how this otherwise only written text was meant to sound. Here's the first movement, the Allegro:

[Kurt Schwitters, 'Ursonate' (excerpt), 1932]



[Kurt Schwitters]

Composers too had begun to put more pressure on the voice. In particular Arnold Schoenberg in Vienna who, in 1912, challenged both conventional singing and standard tonality when he animated his already difficult song cycle *Pierrot Lunaire* with *Sprechstimme*. This was a vocal technique that for good reason had been used only rarely – and with extreme caution – in earlier works because, like portamento, it introduced radical pitch-ambiguities, which tended fatally to undermine the tonal order. Schoenberg takes it from the musical periphery and relocates it at the centre. Here's the beginning of the eighth song in the cycle, 'Nacht'.

**[Arnold Schoenberg, 'Nacht (Passacaglia)', from *Pierrot Lunaire* (excerpt), 1912]**

The most influential and far-reaching change, however, came from the least expected direction.

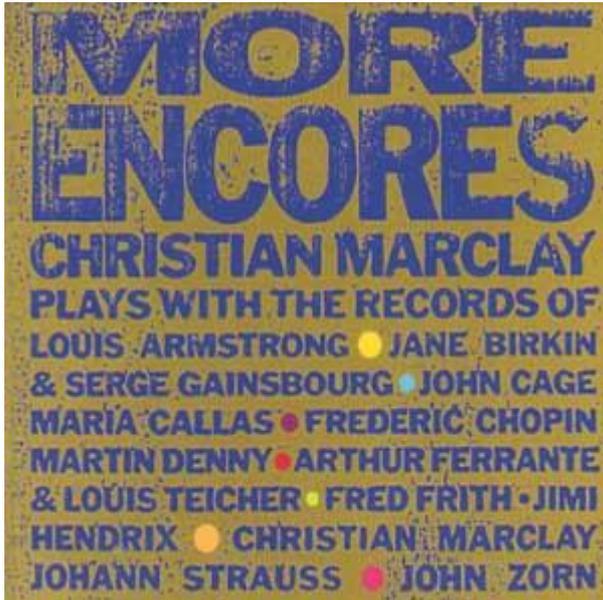
**[Evghenie Humulescu, 'Iubi-Te-voi, Doamne' (excerpt). Sung by Angela Gheorghiu. Composition date unknown, but late nineteenth / early twentieth century. Recording from 2001]**

Public and social singing had always been defined by the need to project. From church to opera, *bel canto* to music hall, the voice was first and inescapably confronted with acoustic spaces that it had to fill. Choirs were the obvious solution for larger environments, but after the creation of opera – in which dramatic form obliged individuals to carry the musical burden – new vocal techniques evolved which enabled singers not only to fill ever-larger public auditoria, but also to be heard above increasingly expanded instrumental ensembles. So what we now know as the operatic voice, was a highly unnatural – and highly formalised – response to a very practical problem: offering a singing solution in contexts for which other, more intimate – and, one has to say, more versatile – forms of singing would fail for simple lack of power: a textbook case of the survival of the loudest. I'd like to propose a simple evolutionary rule here; one which can be universally applied. It's this: instruments, performance techniques, and all the forms that music can take have no choice but to evolve in lockstep with the exigencies, on the one hand, of the physical spaces in which they have to operate and, on the other, of the necessities of their social function. That's why they vary so widely between cathedrals, drawing rooms, dancehalls and battlefields. In the real world, space is absolute.

So, imagine the existential confusion created by the invention of sound recording. Suddenly there's an unnatural and unprecedented environment to deal with in which – beyond the few centimetres between a singer's lips and the recording ear – *there's no physical space to fill*. And, when it comes to matching other instruments, engineers quickly discovered that by the simple expedient of locating a singer very close to – and everything else at varying but greater distances from – the recording ear, any voice at all could be made audible above any kind of accompaniment. In other words, in the recording environment, real-world acoustics no longer determine the way sounds have to be produced, or the kinds of music that can be made. In fact, recording was an entirely alien ecosystem in which a whole set of new and unknown laws had to be discovered.

**[Enrico Caruso, 'Una Furtiva Lagrima' (excerpt) from act II, scene 2 of the *L'Elisir d'Amore* by Gaetano Donizetti, 1831. This recording is from 1904]**

That said, in the early decades, the limited frequency sensitivity and general weakness of early acoustical recording technologies meant that singers were still obliged to shout if they wanted to be heard. And it wasn't until the early twenties, when the industry was transformed by electrification, that singers were able to use more of their range effectively. It wasn't just that the electric microphone was more sensitive than the acoustic horn, but also that its work was no longer to transmit physical energy directly to the cutting head. An intermediate state was interposed between source and disc in which the mechanical energy of the incoming sound was transformed into a stream of electrical data. And in this form, the captured information no longer answered to acoustical or mechanical laws, but could be processed and altered electronically, according to the very different laws that governed electron flow. In addition, electrical recording was no longer tied to a single, monophonic, ear but could listen with multiple ears – all of which could be modified and integrated before the final signal was converted back into physical – and therefore audible – sound. The quietest whisper was now



[Christian Marclay, *More Encores*, 1989]

as recordable as the loudest scream – and as easily heard – even on top of an orchestra going at full tilt.

**[Art Bears, 'The Bath of Stars' (excerpt), 1979]**

Once singing ceased to be conditioned by space – or the need to compete with other instruments – nothing remained to inhibit more private and intimate forms of vocal delivery – forms that had previously been heard only in the home or the nursery – from entering the public domain. Crooning was born as the direct offspring of the electric microphone, and it brought an entirely new spectrum of harmonics and sonorities into the art of public singing.

Just to mark the contrast, here's Maria Callas, diva of the battling operatic voice – slightly exaggerated for effect here by the turntablist Christian Marclay.

**[Christian Marclay, 'Maria Callas' (excerpt), 1989]**

You can hear that the highly artificial technics of this forceful manner of projection produces – whoever is singing – a uniformity of tone that makes all operatic voices sound unavoidably generic.

**[Blossom Dearie, 'Someone to Watch Over Me' (excerpt), 1959]**

While this more intimate form of address rather accentuates the expression of *personality*.

I plan to look more closely at this phenomenon and its consequences, in a later programme, so now I simply want to establish the idea that this form of symbiotic negotiation with an unfamiliar technology is not something given but rather constitutes an important new technique. Crooning didn't consolidate something already in existence; it had to be discovered, investigated and internalised. The first crooners had to learn the best way to address a microphone. They had to learn the mechanics by which the accentuation or suppression of particular vocal qualities – or even the maintenance of an even tone across different registers – could be achieved through the regulation of distance. They had learn to avoid pops and breath noise and to suppress unfocussed movement. And above all, they needed to find, and refine, the phonogenic voice that was uniquely theirs.

I know crooners are often dismissed as lazy or lucky, but it took imagination and a lot of experience to solve these problems and break with a lifetime of habit. Again, for the record, here's one early example. This is Willard Robison, singing 'The Devil Is Afraid of Music'. It's his own song, and as you'll hear, he is singing it not *at* – but *to* – you.

**[Willard Robison, 'The Devil Is Afraid of Music' (excerpt), 1926]**

Meanwhile, back in the acoustic world – and that's pretty much the only world that art music inhabited then – singers continued to project, though in time no longer confining themselves to what were formerly considered musical sounds. Here's an extract, for instance, from Giles Swayne's 'Cry'.

**[Giles Swayne, 'Cry' (excerpt), 1979]**

It's not only crooning that we owe to the sound recording process – almost every innovation, extension and transformation of the voice seems to come back at some point to this uncanny new technology.

**[Al Jolson, 'My Mammy' (excerpt), 1927]**

In 1927, Hollywood's first talking feature, *The Jazz Singer*, showcased an old vaudevillian singing in classic music hall style. But within a few years, the movie industry, with its almost unlimited resources and extravagant ambitions, had come to play a leading role in the evolution both of recording and of reproductive sound technologies. And continues to do so today. Actors, like singers, had to adapt quickly to the new medium, learning in particular to address individual listeners rather than imaginary auditoria since, in the intimacy of the cinema, declamation – which had been the life-blood of the theatre – seemed false... even grotesque.



[Antonin Artaud]

**[Tod Slaughter, from *Maria Marten*, or *The Murder in the Red Barn* (excerpt), 1935]**

It is interesting that sound recordings – which are made for the most part in a communicative vacuum, and float free of both space and time – should have had this rather introverted effect of drawing both the dramaturgical and the singing voice back down to a more naturalistic register.

Meanwhile, at the outer fringes of traditional theatre, voices were moving in contrary motion – as probes there explored greater rather than lesser intensities of expression. Antonin Artaud, for one, was calling for a theatre that would surround and overwhelm its public and submerge all its participants in an overpowering spectacle of ritual and excess. Far from recalibrating toward a greater naturalism, these actors were being asked to reach into extremes of physical and emotional intensity. And Artaud had particular plans for the voice, which was to be released not only from the slavish delivery of sense or plot, but also from the tyranny of words altogether – to find a new affective power for itself as a raw, elemental and purely emotional force.

**[Antonin Artaud, 'To Have Done with the Judgment of God' (excerpt), 1947]**

Shortly after the second World War – which Artaud had spent in a series of mental asylums – the national radio organisation in Paris asked him to produce a radio work for its new series *The Voice of the Poet*. His contribution was recorded in November, 1947, and nothing like it had ever been heard on the radio before. Nor would it be: the station declined to broadcast it, after which it lay on a shelf unaired for the next twenty years and it wasn't until 1968, twenty years after Artaud's death, that it finally got a public hearing. Yet in its onomatopoeia, glossolalia and abandoned howling, it anticipated much that was to happen to the voice – in every discipline of art - over the following decades – especially on that increasingly porous border that separated therapy, poetry, theatre and music. Here's a short extract from Artaud's prescient radio recording: 'To Have Done with The Judgment of God'.

**[Antonin Artaud, 'To Have Done with the Judgment Of God' (excerpt), 1947]**

And here's Yoko Ono after she and John underwent primal therapy with seventies flavour-of-the-month psychiatric celebrity, Arthur Janov.

**[Yoko Ono, (with the Beatles, unreleased studio session), probably 1969]**

And here's the Art Bears' Dagmar Krause, in 1980.

**[Art Bears, 'Freedom', 1980]**

And Yamatsuka Eye a little more recently, in John Zorn's *Naked City*.

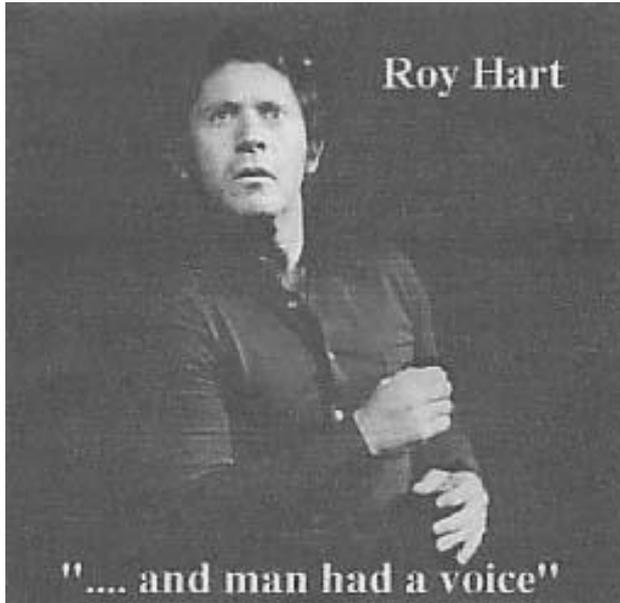
**[John Zorn/Naked City, 'Shangkuan Ling-Feng', 1989]**

In the same year that Artaud produced his radio piece, the South African actor, Roy Hart moved to London and began his studies with the highly unorthodox voice trainer Alfred Wolfsohn. Wolfsohn had come to Britain in the thirties as a refugee from Germany, and had brought with him ideas about the voice that were partly philosophical, partly psychological and partly theological. The constraints of gender he had dismissed entirely, asserting that any voice could be trained to produce a huge range of pitches – up to eight octaves. And he believed profoundly that opening the voice to all the sounds that it could make – ugly as well as beautiful, animal as well as human – would not only have great therapeutic value but would also greatly extend the expressive power of actors and singers alike.

Here are some fragments from Wolfsohn's recording *The Human Voice*, made sometime after 1953.

**[Alfred Wolfsohn, *Demonstration Recordings* (excerpts), date unknown, but close to 1953]**

And this is from a private recording made by Roy Hart in 1964.



[Roy Hart, ... and Man Had a Voice, 1964]

**[Roy Hart, 'Six and a Half Octaves Gliding Up and Down' (excerpts), 1964]**

When Alfred Wolfsohn died in 1962, Hart continued his work. In 1967, he set up the *Roy Hart Theatre* as a forum in which these new techniques could be applied. Here's an example of what he had in mind. This is the beginning of his recitation of T. S. Eliot's *The Rock*, probably recorded in 1964.

**[Roy Hart, T. S. Eliot's, 'The Rock' (excerpt), 1964]**

In general, it has to be said, these probes were having very little direct influence on actors and singers out in the wider world, in part, perhaps, because a lack of persuasive applications had just left them floating free. But in 1968, two major European composers wrote important works specifically to exploit Hart's extended vocal range. Hans Werner Henze wrote *Versuch Über Schweine – Essay on Pigs*, and Peter Maxwell Davies produced his monumental *Eight Songs for a Mad King*. These two works finally brought Hart and Wolfsohn's methods into the mainstream – but of music, not theatre.

Here is Hart himself from Henze's 1968 'Essay on Pigs'.

**[Hans Werner Henze, 'Essay on Pigs' (excerpt), 1968]**

And here is the baritone Julius Eastman singing part of Davies's *Eight Songs for a Mad King* – just one year after its premiere with Hart. It's clear that what Wolfsohn had taught – and Maxwell Davies had thought – had very rapidly recalibrated musicians' conceptions of what was possible and, indeed, what was thinkable. *Eight Songs*, once it existed, was just a score like any other – albeit a demanding one – and the techniques it called for, although novel, were obviously just techniques which, given sufficient application, could be painstakingly learned and copied.

**[Peter Maxwell Davies, 'Eight Songs for a Mad King' (excerpt), 1969]**

By this time, however – we are talking about the late sixties now – other events and personalities had driven past what we might today see as Hart's rather formal even cultish approach. More organic, more empirical probes had been launched – some from studio practice, or experiments with the first generation of portable tape recorders – and others directly from live performance in the field of what Derek Bailey called 'non-idiomatic improvisation'. We will be looking at these more closely in our next programme. But to end this probe, here are some more echoes of Artaud and Wolfsohn that surfaced in the field of extended pop.

This highly distinctive technique emerged from the Czech underground in the sixties and seventies where not one, but almost every, male singer seemed to be channelling their inner bear. This example is by accordionist Jim Čert, but I could have chosen from any number of bands and singers.

**[Jim Čert, 'Havran' (excerpt), probably 2009]**

And then there are the many tributaries of heavy metal and hardcore – death metal, grindcore, screamo and deathcore – to name just a few of them – in which vocal techniques – like instrumental techniques – are virtuosic, and taken very seriously indeed. Their range may be limited but the techniques themselves are extreme – and damaging if not undertaken with care. Countless online tutorials pass on methods and tips...

**[False chord singing, Anon (excerpts), date unknown but recent]**

Taken together, these musical genres are home to a broad cluster of extended techniques which comprise a nuanced range of inhaled and exhaled vocal forms – including death growls, grunts, pig squeals, shrieking, false chords, gutturals and gurgling – although it is not always clear which technique is in play in which song, since understandings can differ and the techniques themselves sometimes blur together. Their roots lie mostly in screams and growls – not the instinctive, animal forms, but more refined and controlled versions, that are driven from the diaphragm rather than the lungs, or that bypass the vocal chords. Most distinctively, these genres have brought a wide range of inhaling techniques into



[Dukuh Encok]

the Western song form – in which sounds are produced while air is being sucked into the lungs, rather than while it is being expelled from them.

Here's Ed Veter's explanation of three of the non-screaming techniques:

**[Ed Veter, as Infidelamsterdam, YouTube demonstration, date unknown]**

Staying with inhales for a moment – since they are found nowhere else in Western singing, except in the mouths of a handful of the most radical improvisers. I'll play four varieties of pig squeals. First you'll hear Nick Pitaro from Misericordiam, followed by an unidentified vocalist from the Californian grindcore band Guttled with Broken Glass.

**[Misericordiam, 'Indie Girl: Admiration for the Girl without a Face' (excerpt), 2006; Guttled with Broken Glass, 'Ramrod' (excerpt), 2007]**

And then, from Indonesia, Dukuh Encok, which seems to be the project of an online duo.

**[Dukuh Encok, 'Satan Entered Vagina' (excerpt), 2011]**

And finally, here's Obie Flett from the Californian Death Metal band Inherit Disease. You are meant to understand these words.

**[Inherit Disease, 'Beyond the Tyranny of Entropy' (excerpt), 2010]**

This is a death growl. The singer here is Cameron Argon, aka Big Chocolate, and the song is taken from his album *Disfiguring the Goddess*. Here we touch on a tricky subject because, while most of our examples come from bands who just play this way – and are understandably protective of their physical skills – Cameron, for this project, works alone – or rather he works with a computer – not only playing but also programming and enhancing his parts; which means that nothing can be taken quite at its face value. Including the voice.<sup>1</sup>

**[Disfiguring the Goddess, 'Abrogation's Crown' (excerpt), 2009]**

For the most common techniques – screaming and false chord singing – both inhale and exhale schools exist, and there is much debate as to which is best. Inhaling is claimed to be simpler and exhaling less damaging to the voice but harder to master. Exhaling also makes the texts easier to articulate

Here are two examples:

First, Rhys Giles from the Australian band Resist the Thought; he's inhaling:

**[Resist the Thought, 'Damnation' (excerpt), 2010]**

Second, Trevor Strnad, from The Black Dahlia Murder, a melodic death metal band from Michigan; he's exhaling.

**[The Black Dahlia Murder, 'What a Horrible Night to Have a Curse' (excerpt), 2007]**

And this is not just a boys game – as Alfred Wolfsohn insisted, women can find the same ranges in their voices, and there are many in this field who do – here is Angela Gossow, for instance, with the Swedish death metal band Arch Enemy.

**[Arch Enemy, 'Nemesis' (excerpt), 2005]**

And finally, for a mixture of gurgles and grunts, here are Matti Way and Eric Flesy from the Californian death metal band Disgorge.

**[Disgorge, 'Deranged Epidemic' (excerpt), 1999]**

Although these genres are typically dismissed and ignored by most commentators – indeed by most people who consider themselves to be musical – they have a massive presence. There is a vast number of bands and the audience is huge – and global. From Armenia to Venezuela, annual festivals attract stadium-sized audiences. In Schleswig-Holstein, for instance, the last Wacken Festival attracted



[Arch Enemy]

some 80,000 fans. It is also a field that has consistently valued technical prowess, and pushed it to extremes – all the way back to its roots in the sixties. Yet for virtually all adult musicological discussion it is either invisible, ignored – or actively reviled. Something interesting is going on here and perhaps we should pay more attention...

I'll give the last word to Angela Gossow. This is from a live recording made at the Download Festival in 2005.

[Arch Enemy, *Dead Bury the Dead Live* (excerpt), 2005]

I see our producer is waving his hourglass. So, in the next programme we'll be following the voice down some increasingly twisted paths.

1. If it wasn't clear already, many of these songs have words, and they are meant to be understood.

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## 02. Selected links

Antonin Artaud

[www.poetryfoundation.org/bio/antonin-artaud](http://www.poetryfoundation.org/bio/antonin-artaud)

Arch Enemy

[www.archenemy.net](http://www.archenemy.net)

Christian Marclay

[www.paulacoopergallery.com/artists/CM](http://www.paulacoopergallery.com/artists/CM)

Futurist Manifesto

[vserver1.cscs.lsa.umich.edu/~crshalizi/T4PM/futurist-manifesto.html](http://vserver1.cscs.lsa.umich.edu/~crshalizi/T4PM/futurist-manifesto.html)

Kurt Schwitters

[www.artchive.com/artchive/S/schwitters.html](http://www.artchive.com/artchive/S/schwitters.html)

[www.kurtschwitterstoday.org/index.html](http://www.kurtschwitterstoday.org/index.html)

Metal Archives

[www.metal-archives.com](http://www.metal-archives.com)

Peter Maxwell Davies

[www.maxopus.com](http://www.maxopus.com)

Roy Hart

[www.roy-hart.com/](http://www.roy-hart.com/)

Yoko Ono

[www.yoko-ono.com](http://www.yoko-ono.com)

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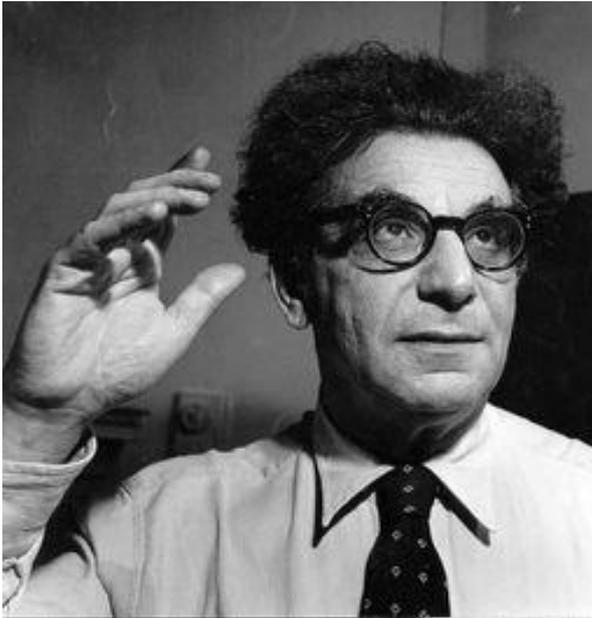
## 03. Notes

### 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.

### Notification

If you want to be notified when a new probe goes up, please mail [remegacorp@dial.pipex.com](mailto:remegacorp@dial.pipex.com) with subject: Probe Me.



[Alfred Wolfsohn]

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#### 04. Acknowledgments

Carve their names with pride: Nick Hobbs, Charles O'Meara, David Petts, Philippe Glandien, William Sharp. Chris Wangro, Tervor Wishart, Phil Zampino, David Lang.

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