

Instruments

Musical instruments are **objects**

Instruments were once only TANGIBLE objects - items that you hold, bang, blow, strum and

They are thus intimately connected to the qualities of the human body and the act of making air vibrate with our dexterous parts.

These instruments are gestural and expressive - a good instrument should shorten the gap between intention and action as much as possible.

But instruments needn't be tangible anymore - a DAW is an instrument, so is a piece of code.

SKILLS

RULES

Digital instruments are often simulacra of once physical things (digitisation) and their interfaces resemble physical assemblies. Like trombones and violins, they facilitate

skilled behaviour.

Others start afresh (digitalisation), transcending the association with bodies and using the unique qualities of digital technology as a starting point; they facilitate

the following of rules.

Must instruments make air vibrate, or can they simply suggest ways of doing so?

a subset of tools

As tools they are defined by their **function, relationship to agents and psychic continuity**. You can use non-instruments as instruments, but they become instruments when you use them

intentionally [AGENCY] to make sounds. [FUNCTION] They return to being tea-chests or combs as soon as you put them down. [CONTINUITY]

a technology

You can use instruments 'incorrectly'

(BLOWING DOWN THE WRONG HOLE)

and you can use them in such a way that exceeds their *instrumentness*.

(BEATING SOMEONE TO DEATH WITH A SAXOPHONE)

The correct use of an instrument is softly constrained by convention, rigidly constrained by physical limits and falls over into non-instrumental use at an undefinable point.

(A SILENT INSTRUMENT CAN STILL BE IN USE)

New technologies are only constrained by their physical limits, given the lack of convention - digital canvases are fresher.

The earliest instruments were probably bone flutes.

Subsequent developments:

optimised the interface between body and instrument
liberated instruments from the constraints of the body

[CRAFT]

[MACHINERY]

[COMPUTATION]

liberated instruments from the constraints of the mind

/new instruments help us to think differently

The Sachs-Hornbostel system categorises the ways in which all instruments in the world make air vibrate. There is just a single category for 'electrophones', encompassing all the instruments that make sound through electronic means. This is ontology outstretching epistemology.

Technology has instigated a rupture that requires a reorganisation of knowledge, not just an expansion of terms.

The computer is not just a neutral instrument, enabling us to capture and generate new sounds - it feeds back into the system of **[actor-context-tool]** in such a way that it delivers a substantive expansion of the ontological object 'music'.

BODY

Unanchored from the demands of performance and skill, **electronic** instruments open the doors to exploring sonics and texture, forging new aesthetics and placing the musical object at the centre [as opposed to the affective relationship between hearer-subject and music-object being primary].

MIND

Unanchored from the demands of human cognition and competence, **digital** instruments open the doors to exploring the impossible, forging new modes of creation that explode the tentative relationship between subject and object entirely.

We are witnessing the fruition of a dialectic that stretches our understanding of technology and the ontology of music to breaking point.

Once it breaks, it must be built anew.

Illustration

§1

Sound can be *illustrative*.

Sound gives us information about the (EXTRA-AURAL) world.

§2

In a famous essay, the Italian Futurist Russolo implied that noise is inherently a product of technology and that noise, in a sense, can only exist in a **world** shaped and permeated by technology.

Noise doesn't exist in a vacuum.

§3

Some noise is produced by technology, some by nature.

Music is a subcategory of noise, produced against a technological background.

The state of the world informs the music that can be created and the music that it makes sense to produce.

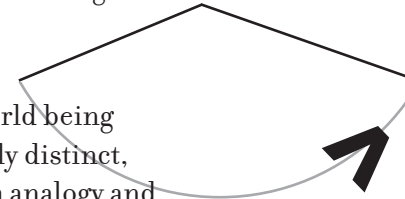
'Ancient life was all S I L E N C E .
In the nineteenth century, with the invention of the machine,
Noise was born.' - Luigi Russolo, 1913

§4

Modernist composers distilled the sounds of the machine-world into formalist compositions that **analogised** the clang and clatter and carnage of the twentieth century; Cage delivered those compositions back to the world and dissolved the ontological distinction between music and noise, art and world.

A pendulum has swung **from:**

music and world being metaphysically distinct, connected via analogy and metaphor



to: music and world being metaphysically entangled because sound and music collapsed together, thanks to technology's racket *seeping in*. §5

But the world doesn't just get noisier.

As our technology develops, the machines get quieter - cars prowl the streets with purring engines, factories house whirring robotics instead of clattering pneumatics, our houses insulate us from the world outside, we cocoon ourselves with headphones and **curate our own soundworld**.

Noises used to intrude on us, now *we manage them*.

Technological development doesn't produce inexorable change in a linear direction; it causes fissures, negations, syntheses. Our art responds accordingly.

World Bound

The world is the cluttered ambience out of which music's orchestrated self emerges and the world is energised and enlivened by sounds - those generated by technology, both musical and incidental



symbiosis

Sound tells us about our environment, in more ways than one. The bounce of an echo indicates how far away a wall is, the rumble of thunder warns us to expect rain, the metaphorical potential of music gives us access to a noumenal truth.

'Ancient life was all silence': nature provided our soundtrack.

Technology gives us new ways to mimic the sounds of nature but also new sounds to mimic.

Not only that, but technology gives us new dynamic contexts to create sound in; soups of phenomena to form new sounds from; new ways of conceiving of the relationship between sound and world because sound and world, in their symbiotic way, have redefined each other.

FREEDOM

FROM
THRU
WITH

TECHNOLOGY



COMMERCE

AND
AGAINST
FOR

TRUTH

The music industry is defined
by technology:



the means of production
(AND ACCESS TO IT)

the means of distribution.
(AND ACCESS TO IT)

Production used to require a
division of labour,



but MIDI changed all that;
the individual producer has
complete control over the
sum and the
parts.

While digital technology has
alienated music from the
body, it has reconnected the
individual with the fruits of
their creative labour.

Cornelius Cardew argued that
academic music (Stockhausen)
served capitalist ends
(Imperialism) by disconnecting
itself from materialist
concerns. To serve the people,
so he wrote, music should
communicate ideology and
employ the working class in a
democratised industry.

This is politics from a different
technological age.

On the contrary, the bedroom
producer is the archetypal
flourishing Marxist:
unalienated from their creative
product, in total control of
their means of production,
and unconstrained by the
demands of capital. The avant-
garde academic has a fleeting
freedom, the digital native has
radical agency.

Music serves neither **capital**
nor **ideology**.

Formats are technologically
defined repositories for sound-
as-information.

Through formats, information
is sold.

Formats constrain possible
artworks, but the development
of new ones creates space for
acts of liminal ingenuity.

Digitisation is the process of
converting analogue to digital,
squeezing the old forms into
new structures. When this
happens there is always a
residue - and sometimes that
residue is a new form of art
(Disintegration Loops).

When technologies of
information consumption (the
vinyl record, the printed book)
align with aesthetic truths, new
conceptual objects are born (the
album, the novel). An Event, as
Badiou would have it.

Experimentation with form and
technological 'progress' cause
these alignments of truth and
medium to phase until new
Events occur, with plenty of
intermediary ephemera - dust
clouds, yet to coalesce.

Digital formats can be infinite
and musical objects are only
constrained by our subjective
apparatus.

What is the noumenal truth of
music-as-object?



We reveal its distorted image
through slices of technology
and sell it by the pound.

Industry