voicings of the auralist

a series of transmissions of an unknown source, captured, translated and written down by Till Bovermann in 2019 for the RottingSounds project.

1 - introduction

As you can hear, this place is full of wonderful sounds. Everything is familiar yet strange. While the nuances of each new day pour over me (rain sounds different than snow, mist and fog changes the acoustics as much as temperature and air pressure), I seem to be the only one noticing it. People seem to be untouched by sounds. Instead, they are obsessed with "vision": Their optical sensing and recognotion apparatus is much more developed than their ears. What is strange is that they cannot actively utter colours as one would assume, given that vision seems to be their primary modality. After all, we can create sound as much as we can listen to it.

2 - language

They communicate with their voices and listen to each other with their ears: At least we have something in common.

Since listening and comprehending is my strength, I learned their language reasonably quick and noticed that it is full of words derived from the visual sense. There are thousands of names for colours, shapes, visual structures, patterns and so on.

Interestingly, they translate language into "writing": words, sentences, whole stories can be, and are indeed, turned into visual shapes; static, forever engraved into a physical, visual form, never-changing but constantly fading away. It is like a million voices from the past, directly whispering at you through your eyes. Eerie. Yet, they believe in writing as if it would come, or actually be, one of their gods or elders singing to them.

While I judge things by ear, tell and re-tell stories, listen to my ever-changing environment, they believe in the seemingly static nature of their captured and visually transcribed sounds much as they believe in their writing and imagery.

3 - categories

I am obsessed with sonic textures, their granularity and spatiality (or lack thereof). The pureness of a sine tone, the grittiness of a roaring voice. The longer I roam, the more I get the feeling that they are affected by these sounds as well. When asked, however, they often deny to be influenced by sound.

The other day, someone explained "music" to me: special sounds or rather chunks of sounds and rhythmical pitch sequences in a particular loudness and timbre range. They

differentiate between "language", "music" and "noise": while
language is a vehicle for communication (much as we do now),
"music" is sound intended for contemplation and emotion. Noise,
finally, is everything that does not fit into the other
categories. It seems that there is a fourth category that is
described as "sound". Mostly, it is used for sounds made on
purpose that are not music or language. I often have
difficulties to differentiate between these categories and find
them rather confusing.

4 - sound collection

Recently, I started to collect sounds: I got hold of a machine
that can "record" and "play-back" what it hears. Playing back
means that, by the press of a button, something the machine
previously listened to "can be heard again". Funnily enough,
and in difference to what the shopkeeper claimed, the play-back
does not sound exactly the same every time. Small changes in
playback speed, a rasping or crackling appears every now and
then, always at a different point. When I pointed out this
fallacy, however, I could not make myself understood. I think
the machine is not broken, though. I would actually have been
surprised to be confronted with an exact copy of what the
machine listend to, every time the same. After all, everything
changes all the time. Sound is time-based, even time-dependant.
There is no static in sound, only continuation. Sound is
ephemeral, its decay is inevitable and immediate.

5 - recording

I am digging deeper into the range of available recording
machines. It turns out that sound can be "stored" in various
forms.
   Similar to "writing", sound can be "recorded" onto a medium.
Only, transcribing to the medium and reading it back cannot be
done without a tool. There are many different vehicles for
sound recording: "Phonographs" ("sound writing" machines) and
magnetic storage media (called "Tape", or "Musicassette") are
analogous systems, contrasting to discrete, number-based ones
storing their information optically (called "CD"), magnetic
("DAT", "HDD"), or semi-conductive physical ("SSD").
   People seem to be eager to introduce abstractions into these
storage systems. Magnetic storage, for instance, can be written
and read out with electrical devices and turned into electrical
signals. The signals can be manipulated, "copied" and
amplified. During these operations, no sounds are heard, or, at
least, no sounds that I can associate with the one's stored on
the machines. It seems like the sound is captured in a
different dimension, unaccessible to me, unless I use a
dedicated playback device.
   People found a way to even further this "manipulability" by
discretising sound waves into tiny, static sections, each
indicating one of a very finite number of values. When varying
the strength of an electric signal fast enough according to
these values, an impression of a dynamically changing electric
wave unfolds, which can be made audible by a "loudspeaker"
(essentially an electric coil attached to a piece of
cardboard).

This technology is broadly used to store away sound. A play
back of these chunks, or "files", as they call them, is a
surprisingly realistic reproduction of what was previously
captured.

I wonder if this technology also allows to create sounds that
were not recorded before.

6 - digital (observation)

The dissection and examination of a recording device turned out
to be valuable: I found several identifiable components, some
(called "microphone") to turn pressure variations into changes
of electrical current, others to measure this current some ten-
thousand times per second to encode the reading value into a
binary representation. They refer to this stream of information
as being of "digital" nature. A third component, the "memory",
is used to store away the digital sound stream, while a fourth
component makes it possible to play back (make audible) what
was previously stored.

I was particularly surprised to see the meticulous attempts
built into the machine to ensure an exact replay of what is
stored on its memory, since for me it is common sense that
everything changes, all the time. Deterioration, dynamics, and
change are fundamental to the nature of everything. Everything
is sound, sound is ephemeral. It can only be re-imagined and
re-interpreted.

It turns out that our common sense knowledge is not obvious
to the designers of the machines (and to the people here in
general). Instead, they try everything to keep the copy and its
reproduction as clean and equal to the "original" as possible.

7 - error correction

I found out more about the part in the machines that ensures
"correct" playback: Actually and unsurprisingly, a lot of the
media used here for storing digital information is prone to
errors in reading and writing. But the process of re-playing
the information is very delicate: Even small errors would
result in big changes, even complete silence where there should
be "music". To prevent this, they use mechanisms they call
"error correction". Such error correction is build right into
the playback mechanisms, sometimes also into the data storage
itself: information is for example not written in its natural
order of appearance but scrambled in a specific way: in case
chunks of the data is not readable anymore, not a sequential
part of information will be missing but rather small pieces
that can be reconstructed, extrapolated, based on the
information around them. I wonder, however, how mangled, un-
recostructed information sounds like, what aesthetical
qualities it follows, what language it speaks.

They claim that this "error correction" allows for "clean",
reproducible audio. But it comes with a price: Although
recorded sound can be reconstructed from a medium with moderate
data failure, the degradation (or alteration) that continuously
takes place on the medium itself will eventually take over more
data than what is needed for the recostruction. Once, this

border is crissed, the error correction fails and the sound stored on the medium is completely lost, seemingly from one moment to another.

This means that the process of degradation is still ubiquitous yet hidden: it happens all the time without anyone noticing only until it is too late.

8 - trinity

"Digital" is a strange beast. People use it as a term for everything and nothing at the same time: "Digital" is information stored in binary format. "Digital" is everything that has to do with modern living. "Digital" is the new way of life, digital is a synonym for activities of communication via a network called "internet".

The notion possibly has its origin in the development of "computers": machines that calculate states; blazingly fast yet still static, discrete.

Listening closely, digital turns out to be threefold:

There is "data", a symbolically encoded description. In the case of sound, it may consist of a series of numbers representing the deflection of a speaker cone at a given time, but may as well be a set of rules on how sonic qualities could be derived from environmental factors.

There is "hardware", physical boards populated with semiconductive components, connected with wires, both printed and free-running; spinning magnetic discs, sometimes magnetic tapes, sound-capturing and emanating parts like microphones or loudspeakers. These components form a complex system on, by and for which data is stored and processed.

There is the interpretation level. Data storage is so general, so abstract (almost always in binary code) that an interpretation guideline, a recipe, "codec", or "algorithm" is needed to determine how it is turned back into sound.

The borders of these classes are, however, fuzzy: interpretation can be hard-coded into wires, or, as with error correction, data may contain information on how it should be read. One factor informs the other, nothing can be examined independent of the other.

9 - generativity

To answer my question form above, interfering with the reproduction part of digital audio, sound generation is not only possible but an integral part of music:

Music "production" (its "generation") is separated from music "consumption" (its "perception") not only by the time that passes between production and consumption. Moreover, there are people that are explicitly appointed to music production. They use specific tools that are way more open in their ability to produce dynamically changing structures than the usual playback devices. For them, variations of what was previously heard are not only possible but highly encouraged. Similar to musical instruments that extend the physicality of the body by resonant structures and vibrating elements, there are digital tools where the sound production operates equally to sound reconstruction in recording machines. Their difference lies in the directives for the signal to be played back: The sound

output of a digital instrument is not necessarily determined by
previously recorded streams of sound. Rather it is influenced
by dynamic systems of varying degrees of flexibility: while
some instruments are pretty fixed to a limited vocabulary of
sonic chunks that can be played back at different times, others
dig deep into the complex interplay of digital dynamic systems.
With those it is possible to indeed create, to synthesize
sounds seemingly from nothing. They can be captured, arranged
and mixed into a complex sonic weaving, which itself may form a
coherent gestalt, making the interplay of instruments
unidentifiable and impossible to untangle.

   Most of the times, however, these instruments are used to
create fixed recordings of "music" rather than being recognised
as a music medium themselves.

10 - possibility space

The ubiquitous fixation on static reproduction and thus error
correction makes me think: How could the threefold of "digital"
be (re)formed to allow for a more open approach to digital
sound?

   A representation without or with a lesser amount of error
correction may unfold aesthetic possibilities for a more
dynamic, generative approach to "digital" sound. The uncovered
digital rot would be made explicit, decay types would emerge.
Naturally, decay is present in all parts of the trinity and all
its appearance has a characteristic effect on the sonic gestalt
of the emerging sounds. I shall investigate.