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Microcomputer music is not defined by what it is made with. Microcomputer music deposits raw data, raw energy, raw emotions. Microcomputer music is not a subset of computer music.

Overflow aesthetics.

Microcomputer music does not deal with sonic or other metaphors, nor with representation. Microcomputer music is for listening. Object-object; object-human; human-human.

Microcomputer music is computation-centric, without ascribing value or meaning to the inputs or outputs of computations. Microcomputer music is contradictory; material and immaterial. Microcomputer music is coupled to its physical surroundings but disconnected from 'information'. Microcomputer music is not only of computers, it is also always of something else. If a screen is involved, it is used not to screen something (the thing to which it is attached) but in and of itself; non-transparent, non-depicting.

Microcomputer music imposes limitations that aide invention. Microcomputer music does not celebrate the composer or individual but liberates from the subject. Microcomputer music is found in everyday and technological objects. Complexity before complication; chaos before control; compost before composed.

Microcomputer music is radical, from the root; formed from low-level actions. Microcomputer music is always in-flux, noisy and may be overwritten. Minimal resources, maximum amplitude.

intro

... a 'microcomputer music', a chamber-music version of computer music which eschews the fine-detailed timbres and composed structures in favour of a noisy, in-flux and, crucially, live sonic art.

Cage also discusses being introduced to the filmmaker Oscar Fischinger: "... he began to talk with me about the spirit which is inside each of the objects of this world. So, he told me, all we need to do to liberate that spirit is to brush past the object, and to draw forth its sound."

The fact that the technology is more affordable and readily available, a preoccupation of many DIYers, does not necessarily mean the technology is 'low' ... 'low' forms of technology are often yesterday's high-tech.

Such objects can be considered to have their own will and 'fight back', or act as microcosms for sound exploration and composition. In many instances, repertoire is 'found' in the object rather than played on the instrument ...

//We are writing spirits to put in chips (objects).

"In my electronics, I work with an instrumental principle. ... They [electronic devices] become my friends. They have personalities, that only I see, because of my use of them." (David Tudor)

material

"The tragedy is that the algorithm itself does not often show visual qualities" (Frieder Nake). I feel impelled to write code that looks a particular way or is conceptually interesting, but often this doesn't lead to correspondingly interesting output. This is sad, somehow. I wrote this ...

[sine(sine(sine(sine[step])))], thinking that it might sound good. It doesn't. It is evocative, somehow and should produce some sort of thing-shaping noisy stuff. Instead it just sounded dull. I need to revisit it. Or, rather, accept those dysfunctional results.

//Conceptual vs. 'material' art

//Once upon hearing Mark Fell discuss materiality and later conceptual art, I had the thought that perhaps conceptual art is art that has no physical instantiation, i.e. not even a bullshit curo-babble placard. Art that has been somehow performed into the world is physical, material, has had measurable effects upon the world.

Then again, concepts and thoughts are physical and have effects too, even if they are never voiced or acted upon (is it possible to not act upon a thought? Here's an experiment: think about a polar bear. Do not act upon this thought. (Maybe in a hundred (nay, twenty) years this will be easier as polar bears will be extinct. (almost didn't match parentheses there))).

Also: hardware as not-conceptual art, software as conceptual art. But we are writing firmware, bang in the middle (thinking about you banging rocks together now (thinking about silicon now (note to self: rocks in epoxy))). So we are a-not-conceptual. ?

If, then: conceptual art is impossible.

What happens if the circuit of a transistor radio is housed in a printed plastic bag?

How does this change our relationship with such as object?

The focus on materials, such as an electronic circuit, also raises questions concerning physiologies in performance. The performer no longer remains at the centre in a human-machine interaction, but enters a new speculative relationship.

Nake also writes that when he began using computers, they had no displays, and that they were thus 'less material'. Later, he claims that "... materiality has

returned in form of the 'graphic user interface'". I disagree. Firstly, nothing can be 'not material'. Secondly, a computer with no screen would be the most material of computers. It is always visible. Screen-ful computers are less physical because the fluid and eternally changing world within the display makes the mind withdraw from the body and float in a world made of light. The screen hides itself. A laptop becomes perceptibly material when the battery runs out; it falls and again becomes a lump of metal and plastic. No one fiddles with a phone whilst it's displaying things. The hands handle it when the screen is black. The screen hides itself.

Again, Nike: "... groups and systems of signs of signs, and supersigns, etc.: signs of signs of signs"
//sign(sign(sign(sign[step])))

The material world will become ever precious, edifying and, conversely, dangerous. I am drawn to materials. I am of material. I like to play with and mix materials.

... and foster a more systems-aware mindset that emphasizes the smallness and interconnectedness of humans.

I would like to write a line with a parenthesis that ends in itself. Like this 'this sentence is contained in the following parenthesis()'. Or similarly 'this parenthesis ends here:) and begins here:('

do

Repertoire has to be found. Found in objects, found in the process of making and found in readymade actions. Repeatability, in terms of note-for-note, sound-for-sound is a redundant concept; however, decisions about methods, approaches and processes may be repeated. Composition as process (Cage), and composing inside electronics (Tudor), by extension offer the potential of performing through objects or more specifically performing through electronics.

Apart from a DIY approach and noise aesthetic (and practice), I am also questioning the idea of the composer as an in-control subject in favour of an adaptive and reactive style of performance; thinking in systems and being aware of ecological and technological surroundings and (being open to) their influence; designing instruments and performance-systems which limit and steer possibilities in unexpected ways; and challenging notions of performance and performer in seemingly passive, object performance of non-activities.

Succinctly: objects and things are used to make sound; objects and things are

played and performed; objects and things are exhibited; objects and things occupy a space; objects and things dictate readymade actions; objects and things become points of interaction; and objects and things are made and unmade (broken).

Our performances are always chaotic and contingent. Never planned, never as planned. Perhaps a microcomputer music isn't (just) defined by a limited timbral field but also by such a lack of repeatability. Standard computer music is computed, predetermined, or stochastic; within bounds. Microcomputer music is wild. We write a deterministic program and input a microphone. This system (any system with noisy inputs) can never return to the algorithm's original state of computerness, of determinism.

... wire, solder, electronic components, raw data, electricity itself can all become subject matter for performance.

Technology will always do this, virtuosic instrumentalism is the attempt to avoid and ignore technology's influence on the musician. The virtuoso is in control of technology (he (usually He) thinks).

//Virtuosity is in the listening.

Control and interventions. Do we need to intervene?

... I've got some kind of ownership of what I'm trying to do with the technology. Of course these components still could exist in some terrible weapon or in another context, but I can somehow reshape this stuff in a different way, or use this technology for my ends rather than be dominated by it.

There is the famous saying: (roughly) 'If your tool is a hammer, all your problems look like nails'. Now wondering what your problems look like if you are the hammer.

The idea of a formalised music frightens me. I prefer informal situations.

Guess your code is for PIC. Maybe I should just do the shouting horns :-)

```
if(TRUE)
Disorganised sound.
```

A square wave generator produces a square wave. It is one-hundred-percent faithful in the representation of itself and thereby 'high-fidelity'. What is perceived, therefore, as lo-fi sound is bound to both technological and

phenomenological issues.
//Fidelity is in the listening.

char message[] = [set the speed of text scrolling and the brightness of the LCD so that the text can be easily viewed and read at a moderate pace] ("This talk is about not only how we shape technology, but also how technology shapes us ...

There is a fundamental alignment between the practice of improvisation and DIY electronic music in that both have the capacity to occupy the realm of the unknown and require things – both abstract (musical) ideas and physical artefacts – to be built.

Computers are so strict.

```
//performance location flexible (battery-powered)
if (location = 0);
location = outdoors;
else
location = indoors;
}
return (EXIT_SUCCESS);
}
```

Re: Nike's belated manifesto and the 57mm. Writing 'perhaps' isn't very manifesto-like. Rather than dictate 'do this' we could ask the computer to do something. Ask, not state that 'if rand()%1 == 1 then execute this piece of code', but to say, 'Would you mind performing operation x on array n? No? That's ok. I've brought some blowouts I can play instead.'

Can there be such a thing as misprogramming?

//The Constantly Complaining C Compiler puts an end to this interesting idea. Supposedly. One could still generate hex files in other ways and upload. This leads to 'bricking'. I like this idea. Bricks are emblematic of the physical world, c.f. Samuel Johnson refuting idealism thus (although with a rock, i.e. a naturally occurring brick). I think using the word 'brick' as noun/verb for electronic devices rendered unusable is interesting. C.f. me re: fondling a sleeping phone. Perhaps we should have a bricklaying workshop (c.f. obstructing fire exits in Copenhagen) where we make a ziggurat (for instance) out of dead phones. Also c.f. Daniel Ploeger's bricked smartphone encased in concrete.

Why write about machines when machines can talk for themselves?

The texts will be indelibly written to EEPROM of a chip on an artwork printed

circuit board and manifest as noise.

I'm limited by my knowledge and materials. By materials I mean the memory of the chip, or its clock speed - how fast it can process stuff - or the configuration of the chip.

process ... work

I think the object can be the work, yes.

If I make something with electronics, someone would say, "Ah, it's a synthesiser." They may stretch their imagination to think of it as some kind of sound device, but they will not think of it necessarily as composition or music.

My view of music has become object-orientated; or more specifically about the relationships between humans and objects; or humans and humans; or objects and objects. "I like machines but love humans".

Thinking about the texts. I guess we will have to do some ASCII to decimal conversion. The characters will run from 32 (space) to 122 (z) with some extra ä ö ü (228 246 252). So, meddling with spikes from 'foreign' characters.

Code is hacked, cut and pasted, modified, primitive but in some ways refined.

[I seek] to look beyond the lexicon associated with synthesisers and sound circuits.

... it is only through the process of investigation, exploration and research of the circuit/objects that the music/performance are found or realised.

Through the problematising of electronic sound circuit, the designer, artist, performer is pushed to think beyond the immediate workings or functionality of a device or apparatus towards the post-optimal technological object ... The circuit is not necessarily a means to an end - part of a sound generating circuit or synthesiser - but exists as an ecosystem in its own right.

There is no methodology as such, because method and result are intrinsically linked. The work 'is' the method, or the method 'is' the work.

I have argued assertively in writing and dialogue about the clear distinctions between composition and non-compositional activities ... but perhaps this is more out of consideration for what is effective than for what is absolutely true. My belief is that the problems I see in the field of composition - such as the

obsession with control, genius cults and rampant individualism - need addressing, and accepting that an anti-compositional form of music making is just another kind of composition is clearly contrary to these goals. Changing composition superficially whilst retaining the authorial ideal is pointless from this perspective.

//Signed anonymous

A microprocessor provides a basis to store data and musical ideas that can be disseminated. Hence the idea of a physical edition or release.

... composing - devising; composer - performer; composition - instrument; part - whole; fixed - ephemeral; dirty - clean; to lose - to find; DIY - DIT; exclusive - inclusive; factory-made - hand-made; product - experience; expensive - cheap; gendered - non-gendered; old music - new music; note - sound; sound - noise; noise - silence ...

//composting ... composters inside electronics (earth calling Martin Howse) ... conductors inside electronics ... semicomposter ...

Yes. I've written a voltage collection for a standalone synthesiser. The result is a kind of generative or automated piece of music. But it is possible to play live with these voltages using the control parameters of the synthesiser. Patterns and phrases can be abstracted; so where does composition begin and end?

... performance-installation - a hybrid of installation and performing arts; objet trouvé, found sound, and object-orientated approaches to performance ... a collection of often-disparate odds and ends ... repertoire is ... found through the act of making and exploring objects, things and their materials. ... an instrument that is configured from performance to performance and where the idea of connecting constituent parts is emphasised.

Making (assembling) and unmaking (disassembling) are viewed as one and the same: part of the same cyclic process of discovery. And making becomes a critical process from which to reflect, reinvent and rejuvenate and not just a means to an end. Work remains tied to materials, or more directly 'of' material and object-orientated.

//Interesting to think of making as a means to the end, and difficult to decide upon a position to hold. I am (we are) interested in 'de-purposing', supposedly useless artefacts, 'low' technology and engaging with design, manufacture, DIY/DIT. But also, it seems like the 'maker culture' is completely obsessed with making things that have no purpose in a way that is kind of disgusting. These issues and the differing views on the value and purpose of the act of making create some confusion as to where the means and the end lie?

A PRE-EVENT CONSTRUCTION EXPERIMENT will consist of the collective improvisation of an experimental construct. It will be large, too large for the space it fills. It will become a place to be in, to perform in and around; it will direct and shape sounds and light. It will be built out of wood and nails.

Building it will be a celebration of physical labour, and a step away from the artificial and shallow maker nerd culture.

The construct has no other purpose than its creation and existence.

There is a convergence between the idea of arts and crafts, artist and craftsperson, and materials and structures. ... [In] a music of objects ... performer, maker, composer, and designer melt into a singular observer and listener.

offcuts

I'm meant to be a 'Reader'. Can I not just be a 'Listener'?

... noise, babbly variant; flangy sweeps slow; someone likes an input device; very ambienty, sing beatings or run into a pitchshifter; automatic atomation, touchy; you are not invited; upside down deep depths; scraping a barrel; speewing wodn; sing version of a randoer; keeps noise coming; someone just texted you; dog fi. this country's going to the dogs and I for one welcome our new canine overlords; good indigestion; up swwpess se sweeps; kicks!, i think it might be original kicks ...

Is today's music tomorrow's noise; or today's noise tomorrow's music?

... digi skippy, carrot mode; more digital squiggles; disagreeable noise; automatic expressions; more computer, more giga; noo ok its ok digy blups; carrot stuck in a microwave; fluctuaty noise; interruptable w .. variant; to think that you could have bought a buchla for all this money; dork carrot; songable; cadge of honour; micy - iny - sing or feedback to this; you don't OWN ME MAN; i stepped on your banjo; secret boops; Pierre Boole's's computer mic; this actually does sound broken; John Cage's computer; mic preamp with snails (sing onto this) (yes onto); nega-yep "kix"; underground boopcomputer; gnarly there ...

For Sun Wei. The 'very great' chip. Music for minipic.

statements on microcomputer music by
John Richards and Max Wainwright
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