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21M.361 Composing with Computers I (Electronic Music Composition)  
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## **21M.361: Composing with Computers I (Electronic Music Composition)**

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Spring 2008 OCW

### **Listening Notes 3.3: More Noise**

(A couple of entries were borrowed courtesy of Evan Ziporyn, and used with permission.)

### **Nomex—Time Vs. Mind (Penultimate Drill Turntable) (from Garten Der Verschlungenen Pfade - Jahr 2001) [volume warning!]**

If you listen to this loudly, be warned that the world may seem a quieter place forever after. Nomex is a type of flame-resistant fiber, and I don't know anything about him/her. Garten Der Verschlungenen Pfade (meaning 'garden of the knotted/devoured path') was a club in Berlin, playing experimental noise, and this piece is from their 2001 compilation. I bought it in Berlin, completely randomly. (When I wrote up this piece a couple of years ago for the listening notes, in the Amanita catalog, the CD just before it was "Fuck That Weak Shit Vol. 4" and the one after was "Genetic Mutations, Vol 1." It seems that since then, those CDs have been purchased. Check it out: [www.amanitarecords.com](http://www.amanitarecords.com), it's a great catalog/label.)

For this piece, write a few not-too-impressionistic sentences about something you like in this piece (there's surely something in this for everyone) and similarly, about something you would perhaps change (other than, say, 'the fact that it exists'...). What do you think of the harsh sounds, and the wide dynamic range? Can you imagine how the piece was made, now that you've made your ass-3.2.3: horizontal (linear), temporally changing noise that is not dense?

### **Christian Marclay/Otomo Yoshihide—Derailment (from Moving Parts) (2000)**

Content paraphrased from: <http://allmusic.com/cg/amg.dll?p=amg&sql=10:0sb1z81a2yv8>:

Christian Marclay is a performer, sculptor, and sound artist, experimenting with turntables hip-hoppishly to "avant-garde sound art deconstruction" since 1979. I wonder if it really is deconstruction in the philosophical sense; sometimes people mean destruction, or critique.

Marclay and Japanese turntablist and guitarist Otomo Yoshihide collaborated for this CD, and they "continue in their ongoing quest to evolve music and sound far beyond anything that is even remotely accessible to a mainstream audience." Woah! Hold on there a second, buddy. I think there's some under-estimation going on.

The CD is a “ravenous bricolage of plunderphonics,” meaning that they take sounds from wherever they can. And that means, for them, from cut-up and reassembled records and having to do something with “the turntable itself.”

The allmusic review gets all brainy: “Even with all the noise, Moving Parts succeeds on a heady plane of association where, as Marshall McLuhan would definitely state, ‘the medium is the message.’” Well, true. We have that “ravenous bricolage of plunderphonics”—Hawaiian guitars, gas being released from valves, faint carnival noises, and double-bass pluckings—and we are told these harsh noises are assembled “with the elegance of impressionist painters. And that is truly how they might imagine themselves, painting subtle pictures that change with each viewing depending on the angle and distance with which they are seen.”

What does this piece make you think of? Compare your experience of this—modes of apprehension, types of focus, level of enjoyment, emotional impact, psychological impact—with that of listening to one of those long pieces I keep giving you to listen to.

Very interesting interview: <http://www.furious.com/perfect/christianmarclay.html>.

On Otomo Yoshihide:

<http://www.japanimprov.com/yotomo/>

<http://www.japanimprov.com/yotomo/interview01.html>

### **Atlatl—Subjects to Change (from Assortment of Rounds) (2001)**

Email courtesy of Phil Hendricks (aka Atlatl) and used with permission.

“Hi Peter,

Well, as far as the pieces, they are all improvised performances, recorded in one take using a modular synthesizer. Sometimes I start with a rough idea, but usually I follow the sound and sculpt and push it into something. The pieces are usually parts of longer performances that I trim and edit in Pro Tools. Some are only trimmed, while other pieces have some parts edited out, but usually just a few edits. Most edits are done to remove abrupt unintended changes that can often happen while tweaking a modular, not always a bad thing, but can distract from the mood of the piece. No effects are added later.

I use a modular synthesizer, but I try and avoid typical “synth” sounds, I tend to favor more organic sounds that may not always be immediately recognizable as a synth.

For Assortment of Rounds, I was using an older modular synth that is fairly noisy by today's standards. I explored the noise and the frequencies being generated by the interference between modules, by setting up patches that at normal levels would be barely audible but often on the edge of bursting into oscillation.

As for gear, I acquired this old huge modular, it was someone's DIY E-mu from the late '70s. The strange part is that it was made to be a polyphonic modular,

so although it only has the basic modules it has 12 VCOs [voltage-controlled oscillators], which provides incredible potential. This was all that was used for the All You Fuckers disk.

Assortment of Rounds was mostly another modular cabinet I received with some dysfunctional BBD analog delay units, and spring reverb. Pzlon Vent was a centered around the TS-21 and an old '50s tube oscillator. As for Metasonix gear, I have the TS-21, TM-1, TM-2 and a custom TX-2 with a feedback loop between tube stages. I had a TM-23, but sold it.

I do also do computer music, using things like SoundHack since the early days of it. I guess I do prefer how alive the modular synths are. I come from a visual arts background. Other artists I admire? hmmm... too many of course. David Tudor, Dick Raaijmakers, Luc Ferrari, Xenakis, Ligeti, Bernard Parmegiani...

Phil"

### **Glen Branca—Movement Within (2000)**

Homemade string instruments all tuned to multiples of 10 Hz, then orchestrated to produce 'phenomena'—acoustic illusions of real and imagined instruments—performed by Bang on a Can All-Stars. What can you hear in this piece—can you hear things that are not 'really' there? Write whatever you like.

An interesting interview: [http://www.brassland.org/ahb/writing/archives/2006/03/the\\_master\\_marg.html](http://www.brassland.org/ahb/writing/archives/2006/03/the_master_marg.html).

### **James Tenney—Critical Band (1988)**

James Tenney taught at Cal Arts until his untimely death last year, straddling academia and industry. It has long been rumored that he designed the tones of the touch-tone telephone. He was a computer music pioneer, back when 'computer music' and 'electronic music' for two completely separate things (the former has subsumed the latter, for the most part). Electronic music was made on analog synthesizers and tape machines, and computer music, well, it involved punchcards.

This piece comes from late in his career. He had been extremely influenced by minimalism (in music and visual arts) and Zen—you'll feel the patience and the calm. This piece is a good example of the dialectic between electronic and acoustic music: it's real instruments (recorded live, in fact), playing eminently playable things, but based on ideas that could only have come out of the studio. In this case, the form of the piece involves a gradual spreading from a single note, through the 'critical band' and into the realm of harmony. The term 'critical band' refers to the range of intervals within which two notes will sound as if they are fusing into a single note. See <http://www.music.gla.ac.uk/~george/audio/psy/psy.html>.

The piece's form is as transparent as could be imagined, so that despite the logical, organic directionality of the piece, there is no drama. What, then, is there? Are there moments of arrival, transition, departure,

as we expect in traditional classical (and most pop) music? Sections? How are these delineated if the piece is a continuum? Can you imagine this as an electronic piece?

**Merzbow—Ambient Study for Kinbaku-Bi Part 6 (from Music for Bondage Performance 2) (1996)**



Photo courtesy of Merzbow. Used with permission.

There's an interview with him: <http://www.furious.com/perfect/merzbow.html>. From Japan, the origin of a lot of noise. I just learned what kinbaku-bi is from a website on erotic mummification and rope. I'll leave it at that. Also, he is against whaling, and all that stuff. (These artists... like Thomas Köner, who did Meta Incognita from two weeks ago, wants to reverse global warming. And the director David Lynch, whose soundtrack from Eraserhead we will listen to at some point, wants to raise seven billion dollars towards meditation for world peace.) But I like Merzbow—he gave us permission to publish his photo. Not everyone did, or they didn't respond, hence the sketches.

Comment on the use of stereo, if you think it's important. Say something about how layers are used. How does the piece develop? Do you think the formal change in the middle is successful? And the percussion

sample loop? Say something about the piece's ending. Is the lone pitch at the end a good thing? How would you make this piece? Would you want to?

Further information:

<http://en.wikipedia.org/wiki/Merzbow>

### **KK Null—0-01\_430 (from *Extasy [sic.] of Zero-G Sex*) (1998)**



Drawing courtesy of Rae Zucker. Used with permission.

From Tokyo, KK Null (Kazuyuki Kishino) was a guitarist, then got into noise, and that's all he does. Everything you need to know about him (and I'm not sure you ever need to know about artists) can be found at <http://www.kknull.com/english.html> (you could choose the Japanese option if you like). As with Merzbow, he is very prolific (though no one is as prolific as Merzbow). There is an interview with him at <http://www.soundofjapan.hu/nullinterview.html>. When you see this, you might be thinking, what?!?—I don't read Hungarian!. But it is in English further down.

Listen for the way the stereo field is exploited: there are abrupt placements, and more gradual ones. Comment on the effects of both. How many sounds are used, i.e., how extensive is his sound palette? Say something about how layers function in this piece. Is the noise clean or dirty? Say something about form. Is it important? Do you think the piece is good or successful in some way? Try to imagine how you might make something similar, from what you have been studying over the last few weeks.

### **Arnold Dreyblatt—High Life (1986)**

Dreyblatt is an American composer living in Berlin. His music is based on the acoustic implications of the

overtone series, particularly the resonances that result when string instruments are tuned in simple just intonation, that is, where all intervals are based on low integer ratios (cf. <http://www.justintonation.net>). Most of his music is played by his own band, the Orchestra of Excited Strings, on simple instruments of his own design. This particular example is more austere—not so rhythmic—and thus allows the listener to hear the effect of overtones on timbre. It's probably better to listen first, before you know what the instruments are, and then read the composer's description below.

Most of Dreyblatt's music is harder-edged—I highly recommend *Animal Magnetism* from the album of the same name, as well as the disk *The Adding Machine*, which involves some of Bang on a Can All-Stars, and two MIT students, and which was recorded on campus while the composer was in residence in 2000. One other side note: his current reputation is based mainly on his art installations, most of which pertain to the Holocaust and the Eastern European Jewish experience, and which are shown in museums throughout Europe (for more information, see <http://www.dreyblatt.de>).

Dreyblatt's own notes about this piece (courtesy of Arnold Dreyblatt, used with permission):

“Two strings on an electric, double-neck, lap Hawaiian steel guitar are continually excited by magnetic drivers. Nodal points on the strings are selected by the fingers, isolating different harmonic overtones. At the same time, two plain steel wires on an electric bass are continually excited by a motorized revolving rubber plectrum. The resulting overtones from both instruments combine and fuse, resulting in beating and resonant harmonic textures.... ONE SHOULD LISTEN TO THE MUSIC AT MAXIMUM VOLUME ON A HIGH QUALITY AUDIO SYSTEM (OR WITH STEREO HEADPHONES)!”

Compare this to the Wagner from two weeks ago, and to any other examples that seem relevant (there are plenty). Is there a clearly heard formal design here, or a more latent one? As with other music of this type, this will either bore or mesmerize you—for this reason alone, it's probably worth hearing at least twice. Either way, you should try to figure out why it has this effect.

### **James Tenney—Analog #1 (Noise Study) (1961)**

This piece was composed while Tenney worked at Bell Labs, on a complex noise generator of Tenney's own devising (it involved AM (amplitude modulation, which we'll look at in the next module))—in which he had the ability to select a center frequency, amplitude, and bandwidth, and to interpolate over a given duration between selected initial and final values for these parameters. The device allows for 15 simultaneous 'instruments.'

It is a good example of the ethnomusicological principle that music reflects one's cultural environment: he began and ended each working day by driving through the Holland Tunnel on his way to work. He writes:

“When I did, finally, begin to listen, the sounds of the traffic became so interesting that the trip was no longer a thing to be dreaded and gotten through as quickly as possible. From then on, I actually looked forward to it as a source of new perceptual insights. Gradually, I learned to hear these sounds more acutely, to follow the evolution of single elements within the total sonorous ‘mass,’ to feel, kinesthetically, the characteristic rhythmic articulations of various elements in combination, etc. Then I began to try to analyze the sounds, aurally, to estimate what their physical properties might be—drawing upon what I already knew of acoustics and the correlation of the physical and the subjective attributes of sound.”

He also describes the form of the piece, in detailed terms highly emblematic of the period:

“The piece is divided into five sections, the durations of the sections decreasing, progressively, from the first to the fifth. The piece begins slowly, with relatively wide noise-bands whose center frequencies are distributed evenly throughout the pitch range, approximating a white noise. As the average intensity and temporal density increase (in the second and third sections) the noise bandwidths decrease, until the sounds of each instrument are heard as tones with amplitude fluctuations, rather than as noise-bands. The beginning of section 4 is marked by a sudden change to a lower temporal density (i.e., longer note durations), wider bandwidths, and a new amplitude envelope is introduced, with percussive attack followed by a decreasing—then increasing—amplitude. During this fourth section the average intensity is maintained at a high level. The fifth section begins at a lower intensity, which decreases steadily to the end of the piece. The return to the conditions of the beginning of the piece is manifested in other parameters also, except for temporal density, which increases during the last two sections from a minimum (like the beginning) to a maximum at the end. Thus, except for this note-duration parameter, the overall shape of the piece is a kind of arch.”

Courtesy of Institute of Sonology. Used with permission.  
Source: Tenney, James. “Computer Music Experiences: 1961–64.”  
*Electronic Music Reports* #1, Institute of Sonology, Utrecht, 1969.

How does this noise composition (according to its title) compare with the other noise pieces we have listened to?