21M.361 Composing with Computers I (Electronic Music Composition)
Spring 2008

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This is very long—46 minutes—so don't listen to the whole piece if you don't want to. It doesn't vary that much throughout. But if you have a spare 46 minutes, try the whole thing. I'll reproduce the liner notes—also very long. The composer mentions that these are anecdotal, not analytical. Do read them; they are a scream. I feel like getting someone to read these notes out loud, and making a piece out of the recording. I should add that Ashley owns the label that released this record, and the cover art looks like this:

“Automatic Writing was composed in the recorded form over a period of five years, during which time I was fascinated with ‘involuntary speech.’ I had come to recognize that I might have a mild form of Tourette’s syndrome (characterized in my case by purely involuntary speech) and I wondered, naturally, because the syndrome has to do with sound-making and because the manifestation of the syndrome seemed so much like a primitive form of composing—an urgency connected to the sound-making and the unavoidable feeling that I was trying to ‘get something
right,’—whether the syndrome was connected in some way to my obvious tendencies as a composer.

“I have not kept up with the literature on Tourette’s syndrome, but I have the notion, gathered from conversations with friends who are psychologists, that Tourette’s syndrome has evolved into a kind of catch-all for many kinds of involuntary behavior. The psychologists are probably right, but for my purposes such a general definition is not useful. My understanding is that Tourette simply had the problem of wanting to leave the party for a few minutes to go into the other room and curse. That was what was happening with me, and I noticed (as a composer) that I always said the same thing; I always uttered the same phrases.

“Morton Feldman [we’ll be listening to one of his pieces in two weeks] said that any composer who went around with a tune in his head should be locked up. He didn’t mean that in the practical sense, of course, because nobody should be locked up, considering what locked up means, but he was talking about me as I understood it, so naturally I was interested. These utterances, released in a sought privacy, were the tune that Feldman was talking about. This speech was illegal. That it was also connected to music seemed obvious. The problem of the connection is that music is mostly a deliberately ‘conscious’ activity, especially for a musician, and in the most extreme case, ‘performed’—that is, doubly deliberate.

“John Cage said in one of his books how fond he was of a composer friend who hummed unconsciously while they were walking together. Pierre Boulez said that he hated people who whistle, which I would understand to mean, ‘—while they work.’ Boulez is famous for hating people. so if you whistle there is nothing to worry about career-wise (he would probably hate you for other reasons), but we are getting at the crux of it.

“A few years after all of this searching, I discovered a book by Julian Jaynes, ‘The Origin of Consciousness in the Breakdown of the Bicameral Mind,’ that Jaynes had come to something of the same conclusion about the connection between music and ‘involuntary’ behavior, but it was too late by that time for me to put aside my muttering as aboriginal and not up to the standards of the classics and something to be covered up by a few doses of whatever, and besides the record of Automatic Writing was out and was making quite a stir in the avant-garde circles.

“(I should say in my own defense that Jaynes’s idea involves the origin of consciousness and the language of consciousness in hallucinations and commanding voices from the outside, as in schizophrenia. I didn’t have any of those. Jaynes doesn’t say much about Tourette’s problem, but he makes some perceptive remarks about the relationship between the urge to speak and the
urge to make music, which is the case I was working on.)

“During the time of composing Automatic Writing I was in a deep depression, because, among other things to be depressed about, the world was not interested in the kind of music that I was interested in. I was out of work, so I decided to ‘perform’ involuntary speech. The performances were more or less failures because the difference between involuntary speech and any other kind of allowed behavior is too big to be overcome willfully, so the performances were largely imitations of involuntary speech, with only a few moments here and there of ‘loss of control.’ These moments, triumphs for me, are documented elsewhere, in rumors and in legal briefs against my behavior on stage. Commonly, for instance, people think that involuntary speech is a symptom of drunkenness. (Watching people on the subway who are engaged in involuntary speech behavior and who obviously can’t afford to get drunk should be enough to teach that drunkenness and involuntary speech are different, but we can’t see that logic.) This is dangerous territory for a performer. It is against the ‘law’ of our society to engage in involuntary speech. That’s why we are embarrassed to talk to ourselves. That’s why Tourette had to leave the room. That’s why we are embarrassed by poetry. (T. S. Eliot said that in composing poetry one is either talking to one’s self or to God. Jaynes says that we are talking to God. Tourette had lost God.)

“I spent years tinkering with my consciousness trying to reconcile the performer—legal and highly paid—with the person you cross the street to avoid. The best I could do was a recording, done in the street, but still a performance. The recording documented forty-eight minutes of involuntary speech. It turned out to be, in the lexicon of musical analysis, basically as structured as most music I have studied. This fact, the surfacing of structure in an undeliberated action, is too big to take on here, but it was enough to convince me that the structuralists—the advocates of planning music before you hear or care what the plan gives you—were right: do not rely on unplanned music; it comes out as though it were planned, but planned by someone you cross the street to avoid.

“Since I was the person you would cross the street to avoid, I adopted that person as a character who deserved sympathy, and so Automatic Writing became a kind of opera in my imagination and I began looking for the other characters in the opera. The ‘fourness’ that was a characteristic of the text of the recorded involuntary speech (which I transcribed faithfully after I got over the shock of hearing it in my own voice) and that dominated the musical form also came to dominate the choice and number of characters. I knew there should be four, and I knew that I would know them when they appeared. I will end this long story by saying that the other three characters (the Moog synthesizer, the voice of the French translation, and the background organ harmonies) were, to my surprise, as unplanned, even ‘uncontrolled,’ in their various ways as was the text of the
involuntary speech. And that is how I knew who they were and why they had come to the party.”


I don’t have the original CD of this, so don’t have the liner notes. I emailed her, but she didn’t reply. Laetitia Sonami (as she is usually called) is associated with STEIM in the Netherlands (http://www.steim.org/steim/), and has taught at various schools around the US. I don’t know how she made this piece, but her main instrument is the “Lady’s Glove” (you can read about it at http://www.sonami.net/). Basically it is a black arm-length lycra glove (see picture) with sensors to detect motion. If you look at one of her videos, you will seeing her (sort of) dancing about with her arms and hands. The sensor information is sent, presumably, to some software; we could easily imagine it was Max/MSP.

What kind of voice modification do you think is going on?

Peter Whincop (yet again)—It must be midnight (2002)

I’ve included this because it’s the only piece this week I know for sure was made using Max/MSP. The
voice belongs to Helen Lee, composer of ...longing... below. The Max/MSP patch used takes chunks of a
continuously playing soundfile, looped (a voicemail message asking me why I haven’t come home), and
from that at a tempo faster than that of the chunks being buffered, chooses a starting point and length of
a smaller chunk to be played. So, within a buffered chunk, several randomly placed shorter samples can
be found, all of different lengths. A result is similar to the Stockhausen: words other than those in the
original text can be heard. The remainder of the sounds are made from around twenty analog synthesizer
patches superimposed. I made this piece the day after I made “It was so nice to see you again,” which
again uses a similar Max/MSP patch for the voice and some of the percussion. (Two ex-girlfriends, one
representing good memories, one not so good. This is the not-so-good one, but all of my own doing.) The
piece is supposed to be beautiful, haunting, disturbed, and slightly incomprehensible; she was all those
things.

Moniek Toebosch—L’Essence des Douleurs Contemporaines (2005)

Sound artist from the Netherlands. Also studied fashion, graphic design, and film. Here are three
paraphrasings of quotations from her, not necessarily about this piece, taken from Open Journal, No. 9
(2005), from which I took this recording.

(1) Toebosch believes that “far more thought should be given to the length of time an artwork can be left
in public space.” This is always a problem, a public piece of art being available/visible/audible/useful etc.
for too little time. (The next sentences in the original quote explains that she really means that works
should be out there longer, not shorter.) She writes of the limits of public art. “[T]here should be a few
strict basic rules, for example that an artwork should be ‘restrained,’ not pushy, and not irreversible. The
best thing is for an artwork to reveal itself slowly, like the gable-stones on Amsterdam houses.”
Monuments, she says, are the only things that should be prominent: reminders of unforgettable things.
And surroundings must be taken into account. I personally find this very important (said Peter); too often
there is a public installation that could be anywhere, not site-specific (a popular bit of jargon).

Back to Toebosch and functionality: “Perhaps we should rid ourselves of the term artist when dealing with
a work in public space. The term ‘applied artist’ conveys your responsibility better. Not only artists, but
also committees and principals should give far more thought to how an artwork functions in public space.
The client should indicate the limitations; we’re all far to scared to do that.”

(2) “I think the most important thing for your growth is to meet the right people or to get to know their work.
I always encounter people at the right time, enabling me to go off in a new direction.” For her it was John
Cage—we all encounter at one time or another; for you, at least as early as Listening 1.1. Cage
“liberated” her singing. Liberation always scares me.... Toebosch started “experimenting with song,
producing strange sounds, screaming, shouting.” Interesting. I think I was three years old when that happened. Perhaps she is subconsciously referring to a return to an uninhibited state.

(3) She goes on to say that the younger generation—I don’t know the age bracket but I hope it includes me...—have a greater ability to perceive complexity, see the bigger picture, and to multitask. She says she just gets confused. Oh dear, I must be of her generation. And “[w]hen all is said and done, you need to do very little to create an impressive work.” Bear that in mind!—but it isn’t a call to laziness or complacency....

This particular work is from a series of works of the same name. I cannot find notes specifically to this one, though the following summarized notes sound as if they might be what I was looking for. She obtained sound material from the Netherlands broadcasting service archive, and from a documentary in which a mother in Africa is holding a dead child in her arms. And recordings of Haitian women as they are identifying their murdered husbands at a morgue. And the sounds of sports people who didn’t quite win. The theme here is weeping and sorrow. She says latter (those poor sports people—my heart goes out for them) are “also included, because in our present-day society they are all equated. First you’re watching pictures of war and then have the soccer results dished up. So I included these sounds in the same funerary procession.”

To me, that borders on flippancy. Each to his or her own, I guess. Her justification: “The weeping has been heard elsewhere as well.”

Musically, it reminds me a little of the Bob Ostertag piece from the beginning of the semester, Sooner or Later. But I find the Ostertag a little more meaningful. The present piece, which wasn’t the one described above (as I said), is rather similar.

Do you think that these pieces are exploitative?—loaded question. (I have a disk—accidentally purchased—of a life support machine actually supporting some unnamed person’s life, and I do believe it is switched off at the end, though I could be making that up. I don’t feel like listening to the CD too find out. Ick.)

Helen Lee—...longing... (1999)

Helen, now training to be a Buddhist Nun, was an excellent composer, a Ph.D. candidate at Harvard when I was there. (My Midnight piece is about her....) This is a non-electronic piece based on seven words—“unshaken ether and crystal of human longing”—of a poem by Robert Hass, Privilege of Being (1989) (see http://poemhunter.blogspot.com/2007/09/privelege-of-being.html for instance; if this site dies,
the poem can easily be found elsewhere on the web). I've included it as an example of a non-electronic work that methodically plays with phonemes, and uses instrumental techniques not unlike electronic techniques. Can you imagine this? Helen never actually used electronics or computers for music in a significant way; just for three installations we did.


This is one of the best songs in the world. I've included it in the listening because quite a few parts of it involve modifications of voice. And because I played it to my electronic music composition class at Harvard the day it was released.

**Paul Lansky—More Than Idle Chatter (1985)**

This is like Pattern's Patterns, only I don't think it is as good. It doesn't have the same 'bounce' as the more recent piece. It is part of a series of six Idle Chatter pieces. The speech is synthesized using LPC—linear predictive coding—resynthesis. I'm not sure what program Lansky used; probably CMix, which he wrote. Csound too has LPC. See [http://en.wikipedia.org/wiki/Linear_predictive_coding](http://en.wikipedia.org/wiki/Linear_predictive_coding). Granular synthesis (which we use a fair amount in 21M.540) may have been used to produce the choral-sounding chords. Don't worry if you can't understand the text—it's all nonsense, just phonemes juxtaposed.

**Karlheinz Stockhausen—Gesang der Jünglinge (1955/56)**

The liner notes on this piece are too extensive to reproduce here, aside from nagging, extremely irritating IP issues: the single CD and booklet cost $60, just to give you an idea. Stockhausen, recently deceased, is one of the most important post-war composers. He is most famous, recently, for allegedly saying that the destruction of the World Trade Center in New York was the greatest work of art by lucifer. (Also allegedly, a concert in his honor was then cancelled; and allegedly he later denied having said it, but allegedly issued an apology anyway.) He is a pioneer of electronic music; we will look at one of his early very mathematical studies in two weeks.

Paul McCartney of the Beatles said that he admired this particular piece of music; Stockhausen appears on the cover of Sgt. Pepper, sandwiched between Lenny Bruce and W. C. Fields, his vacant stare suggesting he might have a hand on Mae West's backside (according to a random website).
The impetus for the piece was idea of unifying electronic and vocal sound. “[A]udibly they were to be as fast, as long, as loud, as soft, as dense and interwoven, with as small and large pitch intervals, and in as differentiated variations of timbre as the imagination might require, freed from the physical limitations of any one singer.” We are back in 1955 and electronic music had certainly not peaked (sorry). Vocal sounds are complex, even more so for sung ones—vowels (sounds/timbers) and most consonants (noises).

Stockhausen’s idea of unity, of course proclaimed by the word “only”—a word that shouldn’t be used without caution, like conjugations of “to be’ and ‘the’: “A merging of all the colors used into one sound family can only be experienced if sung sounds can appear to be electronic sounds, and electronic sounds to be sung sounds. At certain points in the composition the sung sounds become comprehensible words; at other points they have a value purely as sounds, and between these extremes are various degrees of verbal comprehensibility.”

Whereas I cannot simply swipe from his text with impunity, the words and syllables he uses come from the roman catholic bible, from the Song of the Youths in the Fiery Furnace (3rd Book of Daniel). Stockhausen, who steals but cannot be thieved from, says “whenever language emerges momentarily from the sound signals, it praises God.”

Two fairly unrelated points emerge from the previous paragraph: (1) the Fiery Furnaces are the best band in the world, and (2) the idea of owning prayer:

The liner notes then go on to explain the extreme complex algorithms that govern the composition, the way new words are formed, and how the sounds were made. You should check it out, well worth a look. It was originally for five speakers, then reduced to four—Harvard has a copy of that version, and play it from time to time at concerts—and we have here a stereo reduction.

Very very extremely definitely check out this link: it has Stockhausen’s opinion on Aphex Twin, and vice versa: http://www.witts.me.uk/pdf/Stockhausen_interview.pdf.

Clearly I have a bone to pick with the man.

Meredith Monk—Hey Rhythm (1997)
Meredith Monk is a multi-disciplinary multimedia artist, perhaps best known for her innovations in vocal technique. [http://en.wikipedia.org/wiki/Meredith_Monk](http://en.wikipedia.org/wiki/Meredith_Monk)

Milton Babbitt—Phonemena (1975)

That’s Babbitt himself (well, an impression of him) at the synthesizer that was used to create the tape part.
The best way I can think of explaining Babbitt’s music is to paraphrase from an abstract from a Society for Music Theory meeting (the people I’m up against, or supposed to be with):

**ASPECTS OF STRUCTURE AS COMPOSITIONAL DETERMINANTS IN MILTON BABBITT’S PHONEMENA FOR SOPRANO AND SYNTHESIZED TAPE**

Mikel Kuehn --Indiana University, South Bend

“This paper conducts an investigation of structure and its relationship to large-scale aspects of the musical surface in Milton Babbitt’s Phonemena (1969–70), for soprano and synthesized tape (or piano). By examining classic all-partition array structures of Babbitt’s second period this paper explains the derivation of Phonemena’s unique text and colorful world of sound, while offering insights into the relatively unexplored realm of realization of pitch, timbre, and dynamics by the RCA Mark II Synthesizer [the analog synthesizer shared by Columbia and Princeton back in the day]. Other issues addressed are aspects of rhythm including a detailed examination of the time-point array’s modular units and their aural function as well as a look at the plethora of contour invariances embedded in the surface of the music projected by the row and array structure. The paper also focuses on the group structure of Phonemena’s array and some general implications of its design. While this study is a detailed survey of Phonemena’s compositional structures and their realization, it offers a great deal of general information that is applicable to the majority of Babbitt’s work.”

That all sounds complicated. As complicated as the work? Does all that “logic” contribute anything? Positive or negative? I should add that Babbitt is one of the most important composers in the US. I find his music hard to deal with, and what he did to music theory—he pretty much established modern music theory in the US—an atrocity to some, and the bane (I like http://www.merriam-webster.com/dictionary/bane) of my existence: my dissertation is a reaction to the formalism and positivism, lacking in any decent phenomenology, his followers have perpetrated.

Again, this piece is nonsense, like Lansky’s piece; just phonemes juxtaposed.