

Conversation between Trimpin and Robert Willey, June 16, 2011.

Topics:

- How to play Nancarrow MIDI files
- Nancarrow's interest in time
- Information overload in Nancarrow's music
- Nancarrow's process of composing
- Trimpin's machine to scan rolls
- Trimpin's *Laptop Percussion Sextet*

T: ...**We have to get the MIDI files eventually ready so that everyone can use them in the right way.** The dynamic range that Nancarrow used, certain parts are forte, back to pianissimo, there are slight changes, but they all have to be scaled somehow for each type of mechanical piano. Each one is different. Even each Disklavier is different.

RW: You could have a *Max* patch with a set of preset tables which the user could edit if it didn't seem right.

T: It just depends on the piano. You would scale it, like add or subtract 10 or 15. You can't just plug in a MIDI file and play it. All these parts have to be understood and dealt with. You are very familiar with this, but some other people are not.

RW: I was just thinking that Schott could publish the MIDI data, but you've reminded me how the rolls were matched with his instruments, and to properly play the *Studies* you would need several editions, one for Disklavier, another for a synthesizer sampler, and so on. When I was working on *Study No. 11* with synthesizers I first tried implementing the volume changes in the score by having constant key velocities and changing the MIDI volume, but that loses the changes in timbre between velocities, so I switched to changing the velocities and keeping the volume constant, as I saw that you had done in one of your MIDI files. Either way, my dynamic levels were too far apart. With MIDI's 127 volume levels I can space the levels 15 numbers apart, and have a very soft pp and a very loud fff, but the changes are too extreme, and it depends on the synthesizer patch and module that are used. It is very tedious to go back and make the changes in the MIDI file so that the levels are, say 8 numbers apart, so I decided to insert an undefined MIDI controller message with values from 1-7, corresponding with the dynamics indicated in the score (from pp to fff). Then I can run the file through *Max*, rewriting the velocities. If other people are going to play the files there could be a *Max* utility that they could use to test the dynamic levels on their system, and to adjust playback for its response. I guess I should go back to the recordings of the pianos and compare the dynamic contrasts in my Disklavier and synthesizer versions with the ranges of Nancarrow's pianos.

T: The Arch St. records would be a good reference.

RW: Robert Shumaker, the engineer, told me that he recorded the piano from the back. I always imagined that the mics were in front. Maybe they had to be in the back because of the noise of the pneumatic system and the rest of the mechanism.

T: That's a problem with the Ampicos. The motor for the bellows is quite noisy.

RW: Jürgen Hocker wrote in the liner notes of recordings of his versions that they put the wind motor in another room.

T: When I saw his Bösendorfer the first time in the 1980s, it was so noisy, the whole piano was shaking back and forth from the bellows motor.

RW: Changing the subject, I'm interested in **what drew Nancarrow to devote himself to working with temporal dissonance**. Do you think there was anything about his personality that predisposed him to it?

T: I think he was interested in investigating it. He once told me that his 7-octave range piano was a problem. He only had 88 keys available. That is reason he was planning on building his percussion instruments, but then that didn't work because of all the pneumatic mechanisms. He got a grand player piano prepared, because the preparation was falling out of the upright. He sold it because it wasn't in good shape, and he couldn't synchronize them. This was always his dilemma. He tried to find ways to synchronize the pianos but he couldn't. His frustration was that he could never synchronize multiple pianos, so that he could separate the different voices on two instruments.

I remember in his studio that he had so many stopwatches lying around. I guess he lost them once in a while in a bookshelf or whatever. When he started to play a *Study* he had to run the whole roll to make sure that it ran at the right tempo. When it was a little too fast or a little too slow he had to adjust it and run it again. It was very time consuming.

RW: The amount of work required to create a roll, and the time it took, must have given him time to think about what he was doing, and the need to plan so as not to have to recut a roll. I wonder how he was changed by that, if he could hear multiple simultaneous tempos better than other people.

T: He drew everything first on the punching score. That made it visible.

RW: It reminds me of a quote from Cage, where he said he wrote music, not to express some emotion, but to be changed by it, by the results of his chance procedures. Nancarrow must have been changed over his lifetime by being immersed in this music, and grew in his capacity to appreciate temporal dissonance. I just wonder why he was the person who did it, why he dedicated so much time to temporal dissonance.

T: He said once that all the other composers worked with harmony and other musical material, but nobody had looked into tempo.

RW: For me, to enjoy it, you have to be able to delight **in information overload**, like an Ives symphony with five different songs going on at the same time. At some points in his music there is too much information and you can't process it all, and other times it thins out. Maybe, as much as temporal dissonance, it's the alternation of too much information and something you can understand. Probably Nancarrow, at least intuitively, spaced out the density of the pieces so that sometimes it's crazy complicated, and other times it thins out, as other composers control the flow of tension/release, dissonance/consonance, or surprise/predictability, which helps maintain the listener's attention and interest.

T: After finishing one voice he could listen to it and then add the next, step by step. He could punch one segment and then listen to it. Sometimes when I listen to the music with students some immediately will have a problem like you said, and feel there is too much information going on at one time. But when you slowly realize and analyze how he worked, and what is actually going on, more and more you start to understand his music.

RW: You can learn to sense when the different parts are getting close to a convergence point, for example.

T: Right.

RW: I asked him once **how he wrote canons**. He was a little hard to interview, because he gave short answers, I think especially when the questions, like that one, seemed to him a bit silly, and the answers obvious. He said that you write the first voice and then see how it fits with the second, and then with the third, and so on. You just do it.

T: In most cases he drew with pencil the first voice, punched it, and then penciled out the next voice.

RW: I thought he wrote the punching score first with all the notes, and then went to the machine and punched them.

T: He would lay out the tempo structure first in pencil on the paper roll. He would transcribe from the punching score onto the paper roll. The timing information on the punching score was not accurate. You see the pencil marks for all the voices on the paper roll. Sometimes he taped over mistakes with Scotch tape and started punching again. There was a lot of editing going on while he was punching. He worked more from the roll. He would listen to one voice, start to sketch out the next, start to punch, and if saw something wasn't right, he would tape over it with Scotch tape. That creates a problem for people working from photocopies of the rolls. Sometimes the copy machine doesn't see the Scotch tape. My first **scanning machine** was based on an optical sensor, and I couldn't use it, because the light would go through the Scotch tape, so I had to redesign the whole machine using air as the sensor. Sometimes there are chads hanging down, because when he punched it, not always the whole hole was punched out completely, but the air could still go through and the key would be played.

RW: Did your machine use the same diameter takeup spool, so that the speed that the roll went through it would speed up the same way that the rolls did on his machine, so that your data has the acceleration built in?

T: Yes. I used an Ampico spool.

RW: One more question: have you had a chance to think about what you might do when you visit us in Lafayette next year, what you might be able to bring?

T: One thing I could bring is the *Laptop Percussion Sextet*, which uses six of my old laptops played with drumsticks. Stanford put a 2 minute video clip on YouTube, so you can see it. The sticks basically bang on the laptops themselves. The laptops are percussion instruments. They are on music stands, so they look like they are six different drums.

RW: We have a surprising collection of world instruments—Taiko drums, Brazilian samba collection, Gamelon, Afro-Cuban, marching band, symphonic percussion, so there will be plenty of choices for things to bang on.