

Christina Viola Oorebeek

TUNING STUDIES (1997-1999)*
for Yamaha Disklavier en piano samples

Act I: Equal temperament
Intermezzo I - Lullaby of thirds
Act II: Octave Rains
Intermezzo II - Falling Fourths
Act III: The Tenth Ascending

Jean Marc Sullon, Centre de Recherches Musicales de Wallonië in Liege, Belgium, assistance electronics and sound technique

version one:

first performance: 1997 Gaudeamus Interpreters Competition, Rotterdam

version two: first performance: April, 1999 in the Stedelijk Museum in Amsterdam

1999 Dag van de Mechaniek Toonzaal Den Bosch

2004 Conlon concert Vishaal, Haarlem

Program Notes:

I had always been fascinated by the sounds of piano tuning and decided to write a piece based on the ritualistic character that it can create before a concert, evocative of a prelude. A good piano tuner is a musicmaker in his own right. He restores anew the raw materials used by the composer and interpreter according to the tuning of the day, laying the foundation for the realisation of their music.

Every tuner has his own working rhythms combining the shifting of the hammer to a new tuning pin, playing the key to be tuned, adjusting the hammer to move the string into "the right spot". A tuner is continually listening to the speed of beats between intervals to determine the accuracy of his work and has his own special checks and controls to engineer a harmonic balance over the keyboard.

These rhythms and the melodic and harmonic materials drawn from the method of the equal temperament tuning were the basis for the musical materials in the piece. The transformation of the materials illustrate a fantasy, "the piano tuning that was transformed into music", a wink to Hans Christian Andersen's "Ugly Duckling" tale.

I used the Yamaha Disklavier for this composition because I wanted to have the freedom to use the piano without the technical limitations of a pianist and yet employ an acoustic instrument. Because a "human interpretation" is never *entirely* possible using a computer, the slightly mechanical sound produced on the Disklavier gave the quality I was looking for.

MUSICAL MATERIALS:

I. Melodic and Harmonic Material:

As the harmonic and melodic basis of the piece, I used the sequence of pitches which is used to lay the foundation of the tuning of a piano in equal temperament, a kind of free *cantus firmus*. The melodic and harmonic materials were extrapolated from this sequence in various ways. I transcribed a recording of one particular tuner using this particular sequence of twelve pitches.

A(1) - A(kl) - F#(1) - C#(1) - F(1) - A(kl) - E(1) - B(kl) - F#(1) - C#(1) - G#(1) - D#(1) - Bb(kl) - F(1) - C

(1) - G(1) - D(1)

* (1 = Middle C and first octave) (kl = the first octave below Middle C)

II. Rhythmic materials

1. The rhythms of the tuning hammer rhythm, the setting of the hammer against the pin, This is a clunking, *marcato* sound.
2. The question and answer rhythm of the hammer and the repeated striking of the key being tuned.

III. Tone color

1. The use of pitch bend in sampled piano's together with the Disklavier to suggest realtime tuning - going in and "out of tune" .
2. Use of various piano samples in different combinations with the acoustic Disklavier, the sampled Disklavier, samples of Honky-tonk pianos, a Steinway piano, a celesta and more.

Technical considerations:

I. First version

The first version of "Tuning Studies" was written for the first version of the Yamaha Disklavier. It was played as a piano solo, sent directly from a Finale midi file to the Disklavier through a midi sound interface with a midi cable.

II. Second version

The combination of using the Disklavier together with piano samples grew from the idea of wanting an orchestral piano sound in the concert hall, with the Disklavier placed directly in front of the audience at an intersection of eight speakers.

I made a spatialisation scheme for the eight speakers. Jean-Marc Sullon programmed this scheme in Max Msp, and he also did all of the sound mixing and technique in the performances.

I used Logic Audio for the second version of "Tuning Studies" using the same notes as the first version, but orchestrating the piano solo with the new instrumentation, digitally processed samples of the Disklavier, Honky-tonk pianos, a Steinway concert grand, a celesta and more.