Baroqtronica: The Art of Machine Listening

12pm, Sunday 19th March, Kettle's Yard, Cambridge.

Inga Maria Klaucke, recorders
Dan Tidhar, harpsichord
Julio d'Escrivan and Nick Collins, computers

N. Collins   **Substituet**
(computer mediated duet for harpsichord versus recorder)

J. S. Bach   **Sonata in D major for recorder and harpsichord after BWV 1028**
(Adagio - Allegro - Andante - Allegro)

J. d'Escrivan   **Tonada Recursiva a la Antigua**
(Variations on a Venezuelan folk work song call for harpsichord and recorder with live computer
processing)

J. M. Leclair   **Sonata in E minor for recorder and basso continuo**
(Adagio - Allegro ma poco - Sarabanda. Largo - Allegro - Altro)

N. Collins   **Ornamaton**
(sonata for recorder and harpsichord with autonomous machine agent adding embellishments)

Substituet

Substitution synthesis allows sound captured from one instrument to control sound captured from
another. In this short work for harpsichord and recorder, such substitutions mediate the duet. You
will hear the instrumentalists play with phantom images of each other, and then eventually
together in a pile-up of real and virtual voices. All of the synthesis is live, and the 'feature
matching' uses properties of the sound such as loudness and timbral characteristics.

Sonata in D major for recorder and harpsichord after BWV 1028

Among the works JS Bach wrote for solo instrument and obligato harpsichord, the three sonatas
for viola da gamba and harpsichord are probably the least well known. The piece in today's
programme is a direct adaptation of the second of these sonatas with the viol part played on voice
flute, which although being of very different tonal character still retains the intimate timbre of the
original instrumentation. And Bach being Bach, constant 'substituting' of parts is central to the
contrapuntal texture of the composition...

Tonada Recursiva Al Estilo Antiguo

The Tonada is a Venezuelan folk idiom, a plaintive worksong from the south-central region. This
tonada is my first attempt at harnessing SuperCollider [a software for live computer music]. It
aims to generate an ambience which is based on the live music itself. The sound is recorded as it
is being played and then processed by the computer, this processed sound together with further
live recordings become recursive as the recordings contain both new material and references to

the previous recording (if this text reads like a repetition but not quite, then it is a good comment on the music !). Fragmentations of the recording feed into new recordings to form unusual textures that act as a backdrop for the flute's themes with harpsichord accompaniment.

Sonata in E minor for recorder and basso continuo

French violinist and composer Jean Marie Leclair (1697 - 1764) successfully drew upon all of Europe's national styles and is chiefly known for his violin music, in particular for his first two published sets of violin sonatas. The first set of twelve, published in 1723, includes two also for flute and basso continuo, and the second dozen includes five also for flute as a possible alternative to the violin, among them the sonata in e minor we play today. It combines the French taste for an abundance of elegant ornamentation with more Italianate stylistic elements of virtuosic instrumental display and indeed competition between the melody and bass parts.

Ornamaton

A new artificial musical lifeform will be unleashed to accompany the instrumentalists as they play an original sonata. The computer's role will be to provide additional ornamentation to the performer's parts. To this end, it is equipped with machine listening technology, simulations of the human ability to track the beat and key, and the capability to find and extract salient note events and reuse them algorithmically. The score (for the human players) is written as a large da capo aria where on the repeat, the humans will gradually play less notes and thus the Ornamaton will be challenged to gradually provide more. The Ornamaton is autonomous and generative, so once set in motion it requires no human input, and its actions, whilst of course constrained by its programming, will be unique to the particular performance.

Biographies

Inga Maria Klaucke currently studies recorder and harpsichord with Christoph Huntgeburth and Mitzi Meyerson at the UdK Berlin, as well as with Daniel Bruggen, Peter Holtslag and Terence Charlston at the Royal Academy of Music London, where she completed an ERASMUS exchange year in 2004/05 and currently remains attached as member of the recorder quintet Consortium 5 and various other chamber groups. Based in Cambridge, she regularly performs both early and contemporary music in England and Germany, and appears in concerts of the Yehudi Menuhin foundation 'Live Music Now!' Berlin.

Dan Tidhar was first introduced to the Harpsichord at the Jerusalem Early Music Workshop, where he was taught by John Toll and Ketil Haugsand. While studying for his PhD in Computer Science at the TU-Berlin, he also completed a Harpsichord performance degree with Mitzi Meyerson at the UdK-Berlin. Since coming to Cambridge to pursue post-doctoral research in Computational Linguistics, he has been performing regularly, both as a soloist and with various groups and ensembles. Recent concerts include Handel's Tamerlano with Cambridge Handel Opera Group, Rameau's Les Incas du Perou with Cambridge University Baroque Ensemble, and a series of solo recitals with Bach's Goldberg variations.

Julio d'Escriván is a Venezuelan composer living in Cambridge. He is currently a senior lecturer at Anglia Ruskin University where among other things he directs the Mechanical and Electroacoustic Musical Experience (MEME). As an electronic composer he has twice won prizes at the Bourges (France) International Festival for Electroacoustic Music. His concert music has been performed and broadcast in Europe and the Americas. He has worked for many years in the Americas writing music for TV and Film.

Nick Collins is finishing his PhD in machine listening technology for concert performance in the Faculty of Music at Cambridge University. He is a specialist in electronic music, but retains a fondness for acoustic musicianship, including occasional inclinations to play piano and violin. He is sufficiently fond of such music making to want to integrate computers and humans, and not to replace humans entirely with robots.