

RoboRecital

Music of J. Brendan Adamson
Tuesday, November 30th, 8:00 PM
Paul Hall, The Juilliard School

Notes

The history of so-called mechanical music is a long and colorful one. The existence of self-powered water-blown instruments of the Roman and Arab worlds likely predated the birth of Christ, and many great composers have worked extensively with musical automata. Self-playing organs were used by Handel, Haydn, Mozart, Cherubini, C.P.E. Bach, and Beethoven, among others.

In the twentieth century, composer Conlon Nancarrow turned to the player piano out of frustration with human performers, and he worked with it almost exclusively for the whole of his adult life. Percy Grainger also found the suprahuman abilities of mechanical instruments compelling. About his own "free music," he wrote in 1938 that it "should pass direct from the imagination of the composer to the ear of the listener by way of delicately controlled musical machines. Too long has music been subject to the limitations of the human hand, and subject to the interfering interpretation of a middle-man: the performer. A composer wants to speak to his public direct. Machines (if properly constructed and properly written for) are capable of niceties of emotional expression impossible to a human performer."

Automation of acoustic instruments allows a composer to transcend limitations of performer ability and offers new sound possibilities that could not be reproduced by a live performer. While other techniques of computer music may seem more practical, the automated instrument approach retains the richness of the source acoustic instrument and offers the visual interest of live instrumental performance.

My music for these instruments takes advantage of the suprahuman abilities of these robots, exploring musical possibilities unachievable by a human musician. My piece "Tides Times Two for Player Piano" was composed first as "Tides" for human pianist, while "Two Studies for Player Piano" and "Study for Player Piano" were composed specifically for player piano. My piece "Three Studies for Automated Organ" was written for Paul Hall's organ, and "Four Studies for GuitarBot" was composed directly for GuitarBot. My interest in temporal canons in the works of Conlon Nancarrow led to explorations of similar possibilities in my composition, "Study for GuitarBot, Disklavier, Automated Organ, and modBots."

Mozart was commissioned in 1790 by the eccentric Count Deym von Stritz to write funeral music for his "Laudon's Mausoleum," a monument featuring a mechanical organ. He later wrote two more pieces for musical automata in Count Deym's collection. The first of these pieces, his F minor fantasia, 'Organ Piece for a Clock,' will be featured on the concert. "Clock" refers not to a timepiece, but to the mechanisms used to automate the organ. Mozart's Fantasia in F minor was written for a small self-playing organ. The original instrument's lowest pipe was pitched an octave below middle C, while the low register of the organs he was known to have

played exceeded this range by three octaves. Jack Jones, in his 1973 dissertation, "Mozart's Compositions for the Mechanical Clock-Organ," writes that "Mozart detested the light high-pitched sounds" of the original mechanical organ, and had this mechanical organ been built with a selection of stops similar to the organs Mozart played, "he would have utilized the full resources of the organ." My transcription maintains the integrity of Mozart's original music, unlike the many practical editions for human performer, and utilizes the full resources of this organ.

J.S. Bach's "Die Kunst der Fuge," in four voices for unspecified instrumentation, is a perfect match for GuitarBot. Contrapuncti II and III are performed.

Four robots are featured: an automated pipe organ; GuitarBot, a self-playing guitar; ModBots, a collection of robotic percussion instruments; and a Yamaha Disklavier, a modern player piano.

Paul Hall's organ, built by the Holtkamp Organ Company, has fifty-seven ranks. Although it is an acoustic instrument, every function available to an organist at the console can be controlled by computer.

GuitarBot and ModBots were created by members of LEMUR, a group that develops robotic musical instruments. GuitarBot was created in 2002 by Eric Singer, Kevin Larke, and David Bianciardi. It is a MIDI-controllable guitar-like instrument. Picking, damping, and pitch seeking are controlled by computer. ModBots, created by Bil Bowen, are modular devices that can be affixed to any structure. They allow a composer musical control of specially designed instruments or structural surfaces in a pre-existing space.

The Disklavier, a MIDI-controllable player piano, is built by the Yamaha Corporation. It is valued for its ability to record and reproduce a live pianist's performance, but its ability to exceed the capabilities of a human performer have made it compelling to composers.

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Brendan Adamson, 2004