

Cort Lippe

Program Notes

Duo for Cajon and Computer (2011) was commissioned by the percussionist Patti Cudd for a tour of Korea and Thailand in May of 2011. The electronic part was created at the Hiller Computer Music Studios of the University at Buffalo, New York, using the software Max/MSP. Technically, the computer tracks parameters of the performance using Miller Puckette's analysis object *bonk~*, which reports attacks, loudness, and brightness (timbre), along with details about relative loudness across the frequency range in 11 independent frequency bands. This allows for larger scale rhythmic and phrase tracking, playing style tracking (including strike type and strike location), and micro-level frequency band tracking of individual strikes, and is used to continuously influence and manipulate the computer sound output by directly affecting digital synthesis and compositional algorithms in real-time. While interacting with the computer system, the performer has a role in shaping all of the computer output. The intent is to create a certain degree of intimacy and interactivity between the performer and the computer in which the performer has the potential to influence the computer output based on aspects of the musical expressivity of his/her interpretation of the score. The computer part is, to a certain degree, an extension of the cajon, so the cajon could be considered more than just an acoustic instrument, while at the same time the computer part could be considered as an independent agent. The relationships exist simultaneously; yet have a certain level of musical and technical ambiguity. Regarding the relationship between the performer and computer, individual expressivity is sometimes meant to serve the whole, and at other times has an individual influence on the entire ensemble, as in any chamber music. The digital synthesis algorithms focus on various kinds of filtering, including resonant filter banks, formant filters, and comb filters, along with delay/feedback, spatialization, frequency shifting, frequency modulation synthesis, and sample playback. This piece is dedicated to Max Matthews, who passed away on April 21, 2011.

Duo for Cajon and Computer is recorded by the percussionist Patti Cudd on the *SEAMUS Label*, vol. 23 and on *Musicworks Press Recordings*.