Cort Lippe

Program Notes

Music for Alto Saxophone and Computer (1997) was commissioned by the American saxophonist Stephen Duke, and premiered by him at the 25th Annual *Festival Synthese* in Bourges, France in June of 1997. The electronic part was created at the Hiller Computer Music Studios of the University at Buffalo, New York, using the IRCAM Signal Processing Workstation (a real-time digital signal processor) and the program *Max* that was developed by Miller Puckette and whose technical support made this piece possible.

The piece makes use of regular/irregular rhythmic and pitch relationships. Metaphorically, I have tried to exploit our rather complicated and intertwined conceptions of humans and machines. We spend a great deal of time trying to discipline ourselves to perform like machines: our ideal of technical perfection is something akin to our idea of a perfectly working machine. Yet, we also have another entirely negative viewpoint towards anything human that is too machine-like. Furthermore, we seem to have a complicated love/hate relationship with machines in general, which is exacerbated by the accelerating replacement of humans by machines in more and more tasks. I am not interested in using the computer to replace musicians, or acoustic instruments. The computer seems best suited to creating new, yet unheard sounds and musical relationships through the exploitation of synthesis and compositional algorithms in real-time. Finally, it seems that in the future, as our machines continue to become more complicated and sophisticated, we will only become more confused about their roles in our lives unless we make an effort to keep our human relationships as non-mechanistic as possible.

Technically the computer tracks parameters of the saxophone, such as pitch, amplitude, spectrum, density, rests, articulation, tempi, etc., and uses this information to trigger specific electronic events, and to continuously control all the computer sound output by directly controlling the digital synthesis algorithms. Thus the performer is expected to interact with the computer, triggering and continuously shaping all of the computer output. Some of the sounds in the electronic part come directly from the composed saxophone part, so that, certain aspects of the musical and sound material of the instrumental and electronic parts are one and the same. Sound material other than the saxophone is also manipulated via time-stretching and granular sampling. FFT-based cross synthesis and analysis/resynthesis using an oscillator bank, as well as other more standard signal processing such as harmonizing, frequency shifting, phasing, spatialization, etc. are all employed. The instrument/machine relationship moves constantly on a continuum between the poles of an extended solo and a duo. Musically, the computer part is, at times, not separate from the saxophone part, but serves rather to amplify the saxophone in many dimensions and directions; while at the other extreme of the continuum, the computer part has its own independent voice.
Duration: 14 minutes.