M 116

MIRROR - RITE

Jonathan Impett

real-time composition for meta-trumpet, computer and electronics (1993)

Mirror-Rite is concerned with the polarities of instrument - composition and performer - composer, in both cases searching for a dynamic balance between immediacy / spontaneity and abstraction / formalisation.

All of the material is derived directly from the performer by the meta-trumpet, an instrument which conveys both physical and musical performance data. This information is processed by the computer; by the changing and contextual logic of the composition it becomes the composition itself. There is no given score or material. Notes become part of compositional processes whose rules derive from the notes themselves. Actions instigate and are taken up into dynamical systems. The work is thus "knowable" but not "masterable".

Sampler, synthesisers and sound processing are controlled by the computer. The sampled sounds are mostly from the trumpet, processed at the CSC, Padova. The composition is written in "C", using the composers "Shells" environment, which runs several layers of input processing and scheduling.

Mirror-Rite could be heard as parallel sequences of rituals in unrecognised languages, of which the performers every action becomes part; and yet all the languages are constructed around aspects of that of the performer. Or a spiral structure of chambers of mirrors, of different shapes and colours, all moving with different dynamics.

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A META - TRUMPET(ER)

JONATHAN IMPETT

The instrument itself takes aspects of performance already inherent in playing the trumpet, abstracting and extending them to become : a) musical material for compositional purposes, and b) means of direct control over other parameters. The data generated could be seen as depicting a broader performance situation, of which the sound of the trumpet is one view.

A central aim in designing the instrument was to permit a close and dynamic relationship between performer, instrument and musical material, whether computer-stored "score" or constructed in real-time from performance data. As in most successful instruments, the roles of sound source and controller can be fully integrated, in this case by effectively incorporating the computer (and thus the composition) in the instrument. The player can maintain a directness and spontaneity of communication, whilst retaining "higher" levels of abstraction and formalisation of both structural and sound material. This can be seen as part of a move to re-empower not only the performer and performing situation but thus also the listener.

Several continuous control parameters are implemented without compromising the richness of the instrument and its technique, or adding extraneous techniques for the performer - most of the actions already occur in conventional performance.

As well as note information, performance parameters include loudness (on two levels to capture breath and instrument sounds), position in a virtual "screen", direction and speed of movement, inclination, hand pressure , breath pressure, valve position and various switches. Data is converted to MIDI by a STEIM Sensorlab, for transmission to the composers "Shells" composition and scheduling environment, running on a Macintosh. It is routed to a current "scene" by input channel, where it can be processed directly or used as material for other processes. Several variable-speed schedulers run simultaneously, triggering MIDI events or internal functions. Output controls the various synthesisers, samplers and processors, including mixing. The meta-trumpet is also being used within the integrated environment of the ISPW, and could be used with other MIDI processing systems.

The trumpet interface was built by Bert Bongers, Den Haag.