

Q/Carving

for quartertone marimba and electronics

by Peter Tornquist

The project

Q/CARVING is part of a joint artistic research project carried out by percussionist Kjell Tore Innervik and composer Peter Tornquist at the Norwegian Academy of Music, in Oslo. The project is carried out within a Ph.D-level Fellowship Program for Artistic Research focusing on artistic processes as methods of research. One of the main topics for our respective projects is the development of more genuinely interactive models of performance and composition.

Main focus

The main focus of Q/CARVING is the creative interaction between composer and performer in the development of new works, and particularly the use of other communicative means than the traditional musical score. In the development process leading from initial concept up to the latest artistic results, we have investigated the use of audio-sampling techniques and digital sound-processing to create improvisational prototypes for the different sections of a work.

Integrating the performer in the creative process ensures a deeper level of assimilation and absorption of the musical ideas put forward by the composer. The performer is invited to aid the exploration of musical possibilities by relating improvisationally – rather than interpretively – to the sonic material. This in turn forges strong and deep cognitive links between the performer and the ideas uncovered by the exploration, in a manner not normally available through the interpretation of notated music.

The process

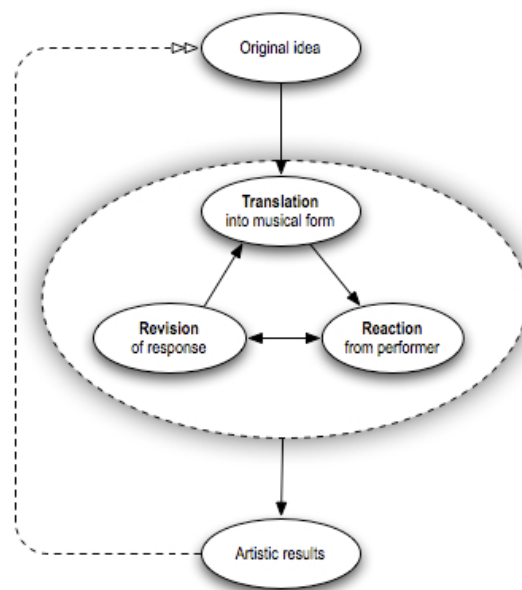
The initial data of Q/CARVING is extracted from a recursive function developed in Open Music (IRCAM) and formatted as a list of co-ordinates [x, y]. These pairs are split into separate streams of data and reinterpreted as lists of frequencies (Hz), durations (msec) and MIDI velocities. The frequency data is further normalised for the extended range and resolution of the quarter-tone marimba, creating a structural link between the instrument and the basic material of the piece.

The semi-chaotic nature of the data precludes any direct transcription into music. The resulting stream of pitches and durations is cognitively amorphous, lacking most of the structural definition needed to extract musical meaning. This definition has to be added through artistic means, either by the composer – acting as interpreter of found objects – or by the performer.

This very act of exploring the material – carving, cutting and shaping it into meaningful sonic forms – is the heart of the project. The interaction between composer and performer is deepened and expanded beyond the mere prescription of musical instructions in a score, and developed in a cyclical feedback-process that is renewed for every performance.

The outer loop of this feedback model is three-folded: it describes a development from original idea to artistic output through an interactive phase, which in itself is organised as a loop. This inner loop starts with the *translation* of any raw materials into a musical form, such as sounds, gestures or notated sketches, and proceeds to the physical interaction and registration of the performer's *reaction*. These reactions are processed by the composer (both in real time and delayed), and fed back into the system as *responses* or new translations.

The experiences and results of the actual performance – cognitive, interpretative or technical – are used as new inputs to the cyclical model, adding new layers of understanding and interpretation to the original material. This is physically manifested by the ongoing process of exchanging samples and sound-files with material recorded at recent performances.



The interactive model of Q/Carving

The work is stylistically situated between composition and improvisation, integrating elements of contemporary instrumental music with performative aspects from electronic genres, such as amplification and live-processing of sound and video. Technically, the work relies on a combination of MIDI-triggered samples and effect-processing designed to be controlled entirely by the performer, without the assistance of the composer or a sound technician.

The entire performance is currently contained as patch in Ableton Live 6, including sound-files and plug-ins. This modularity has proven necessary to ensure a flexible and portable set-up for the many performances required by the interactive process. It also ensures the performer's complete command of the performance, and his need to become fully embodied in the basic ideas of the work, making it – in effect – into his own.