Ways of Making People Move: composing through the live generation of musical scores

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Abstract

Recent technological developments have enabled experiments in cross-domain mapping and transcription — procedures we often undertake intuitively — where data from varied sources: video, biomechanical processes or physical movements, for instance, can be used to generate musical notations in real-time. These representations or 'ways of making people move', (Cardew, Treatise Notebook, 1971) might consist of common practice notation, graphics, text or any combination of these. Such live automatic transcription creates a particular relationship between composer, score, performer and performance: details are unknown, generalities are controllable. Performances can also be augmented by electronically generated sound or other composed, notated material, while the musicians' live performance retains its quality and spontaneity.

This paper, which will include practical demonstrations, presents work involving the above processes. Resulting performances are analysed and the performers encouraged to provide their own insights into their experience.

Technologies used include the SuperCollider audio programming environment and the INScore augmented score viewer. Hardware used in the creation of bespoke interfaces includes ultrasonics, the Kinect and the Leap Motion. As well as providing a fascinating and creative musical experience of preparation and performance, this research highlights a number of issues concerning performance practice, instrumental technique, rehearsal and the balance between notation, now no longer fixed in time, improvisation and sight-reading. Examples of non-specialist improvisation through physical computing and the impact of machine listening are also introduced.

Videos (including live notation) are available at the following locations (these contain the author's name):

https://vimeo.com/42338675 (Calder London)
https://vimeo.com/49482055 (The Fluxus Tree, LIPAM)
https://vimeo.com/64441375 (Three Streams)

NB this presentation can be in several formats: a simple presentation with questions, a presentation including live performed demonstrations including a small performance, or with the performance elements arranged into a separate concert item.

Biography
In recent years Richard Hoadley has composed using his own bespoke systems implementing physical interfaces and algorithmic software which together generate original compositions in real-time as a feature of the performance. He has developed a number of devices including the 'Gaggle' which investigate and facilitate physical interactions with musically expressive algorithms for installations, performances (including dance) and therapeutic environments. In 'Calder's Violin' (2011-12) he included methods for the live presentation of algorithmically generated notation and augmented scores, an approach developed further in 'The Fluxus Tree' (2012), 'Three Streams' and 'Quantum Canticorum' (2013) in which physical movement generates music notation which is then performed live by an instrumentalist. He is affiliated with the Digital Performance Laboratory at Anglia Ruskin University.