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Physical interaction and interpretation in the live generation of musical scores

Grame conference
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this presentation is available at:
http://rhoadley.net/presentations

Three Streams

~ automated composition

~ physical computing

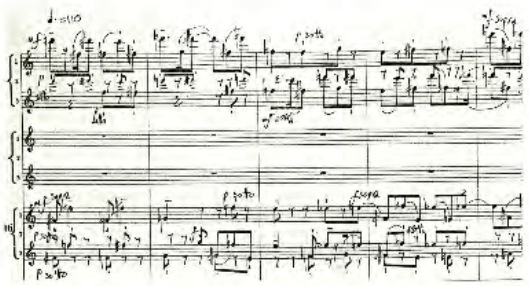
~ music notation

Why?

~ to develop and exploit an understanding of what happens when we compose and perform, including the interaction between composer and performer via notation

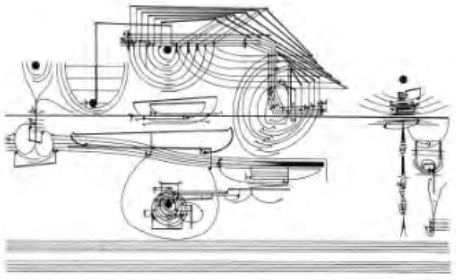
~ notation is in particular a highly complex technical, creative and social phenomenon

Scores, notation, art

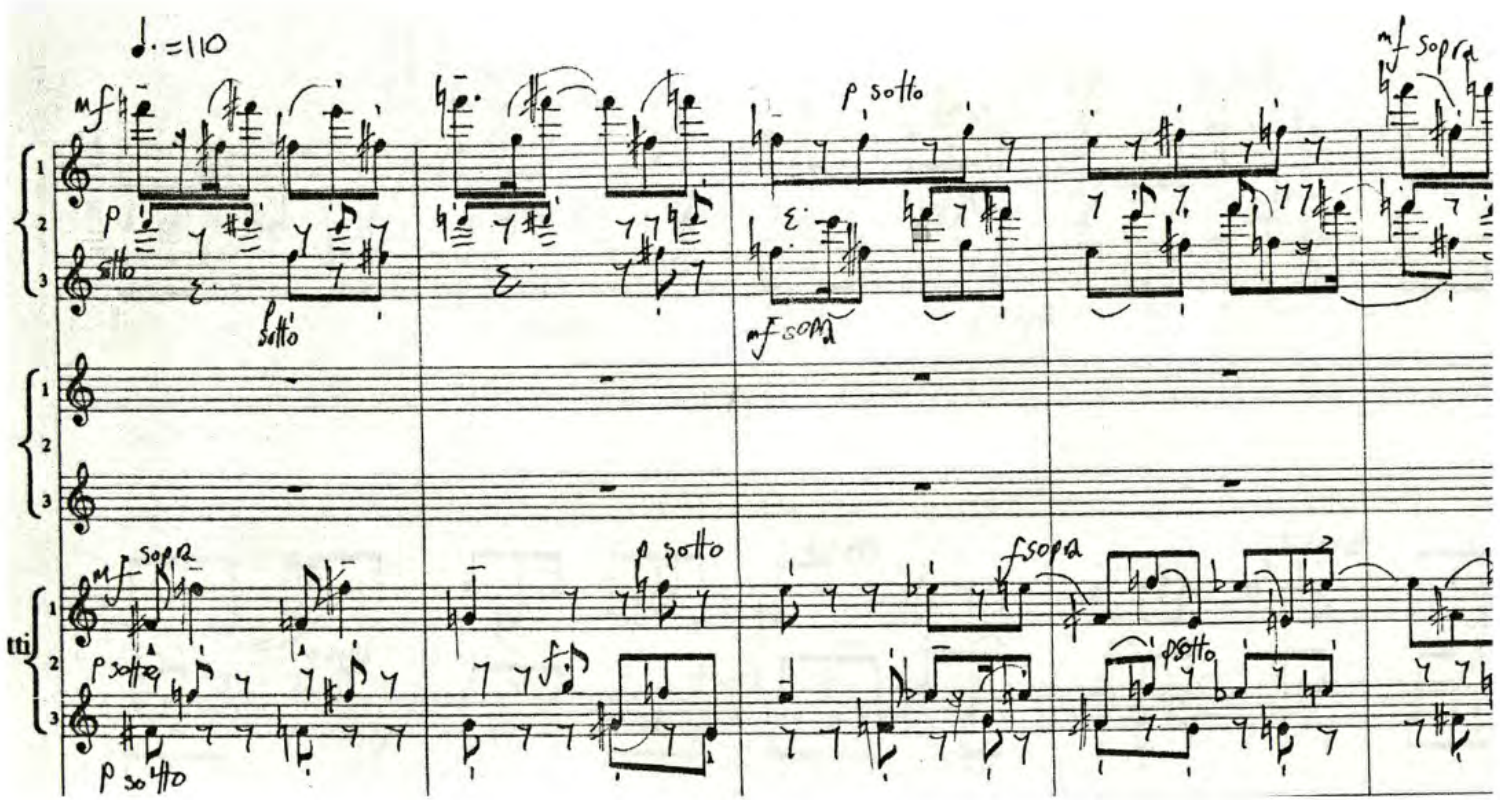


Richard Hoadley, Four Archetypes, 1994

Wassilly Kandinksy, Komposition 8 1923



Cornelius Cardew, Treatise, 1968



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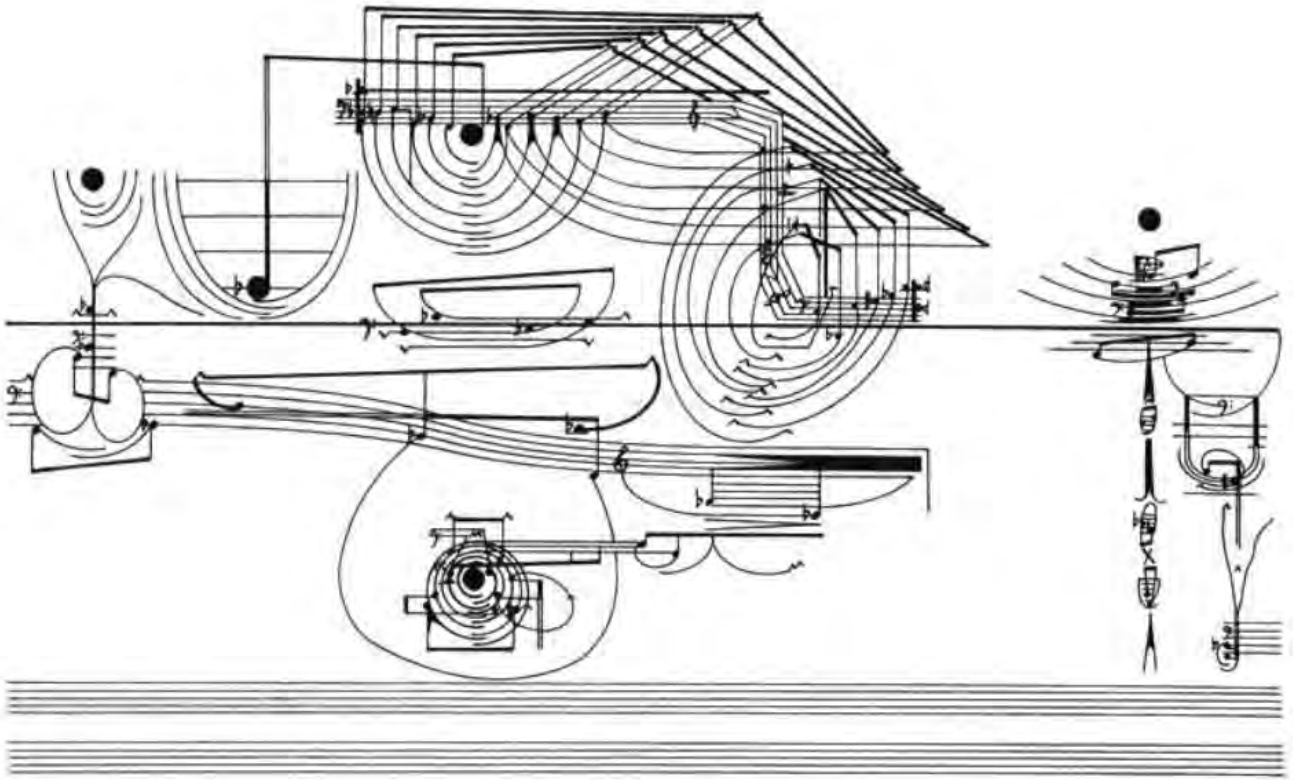


Cornelius Cardew, Treatise, 1968

Why?

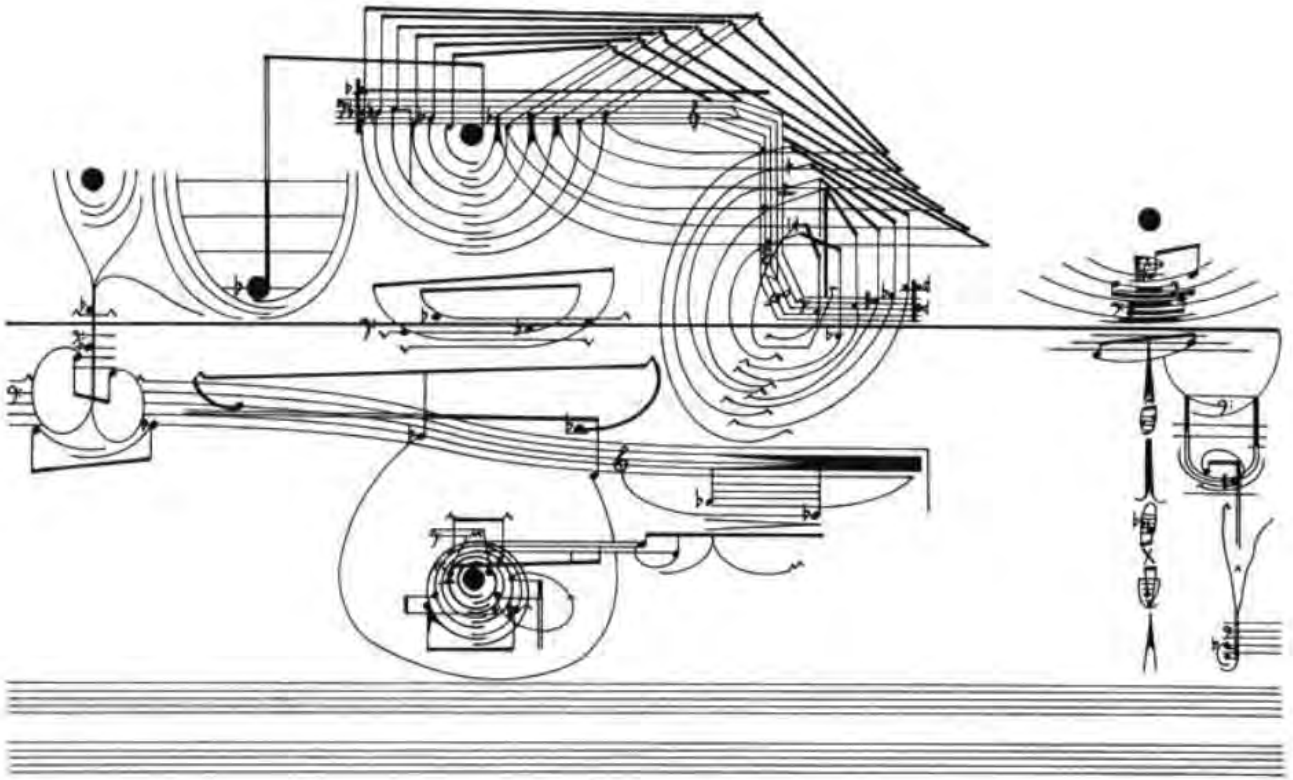
~ my interest in physical computing is related to an interest in how music performance works from a somatic perspective (it also refines and extends the creative imagination)

Other issues

~ NOT (yet) the computer as agent (machine learning)

~ notation: "a way of making people move, of getting them to be engaged in musical activity" (Tilbury/Cardew)

~ complexity of score, sight-reading (prima vista) and improvisation



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YouTube

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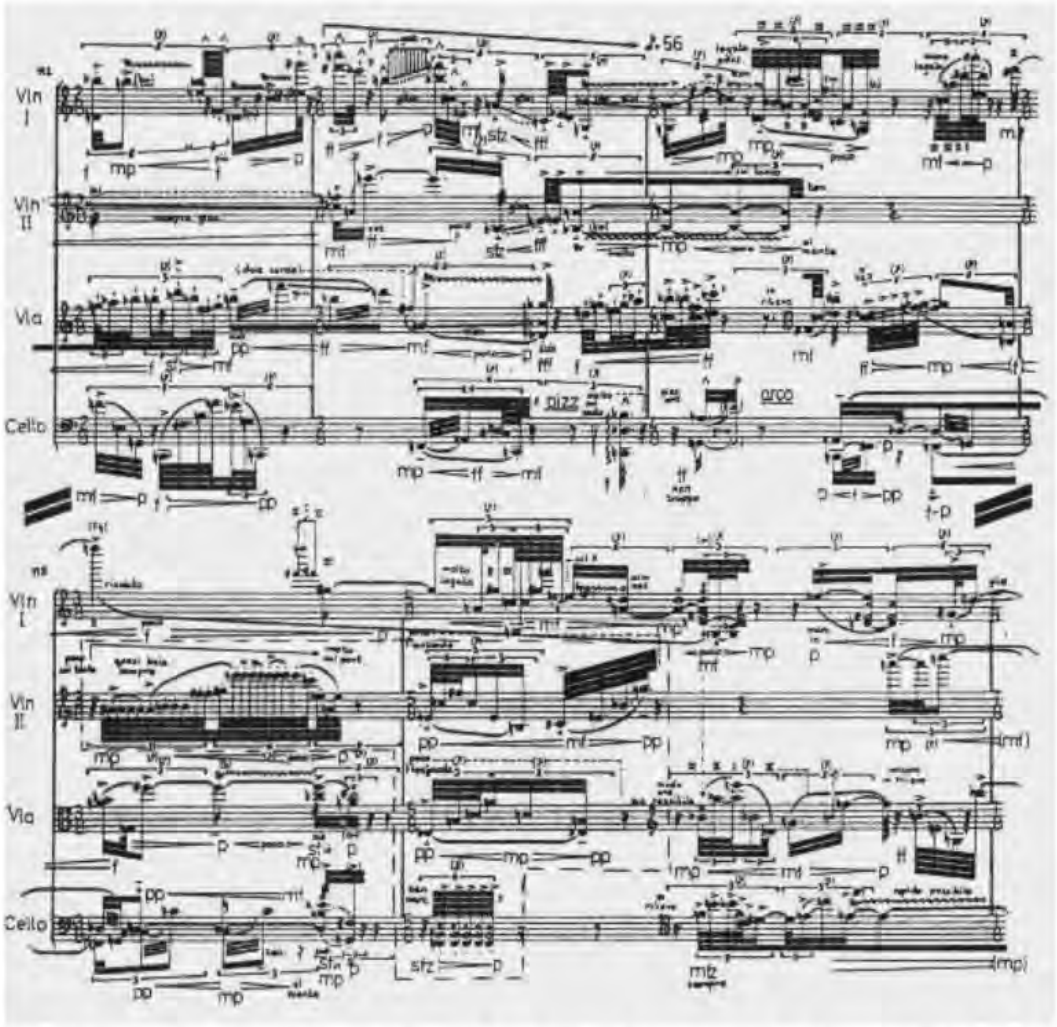
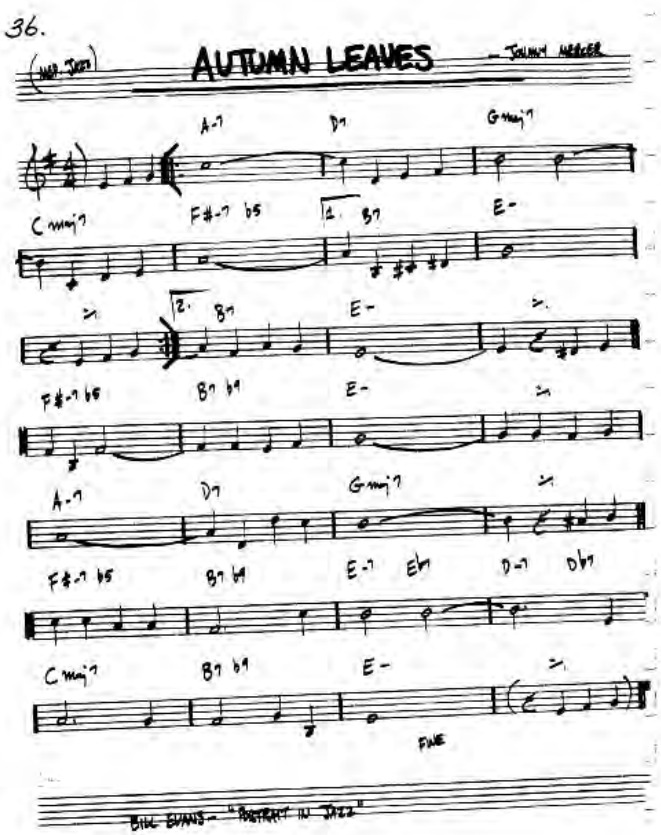


Brian Ferneyhough, String Quartet No 2 (1980)

36.

AUTUMN LEAVES

– JOHNNY MERCER



Performances

Gaggle, HCI conference, 2009, Cambridge UK

Museums, Interfaces, Spaces and Technologies Conference, 2010, Cambridge UK

Triggered, Kings Place, London, 2011
YouTube

Fluxus, 2012

Calder's Violin, London, 2012
YouTube

The Fluxus Tree, Leeds, Coventry , London, 2012-13

The Fluxus Tree @ Phase Transitions, Cambridge, 2012

Three Streams, Cambridge UK, 2013

demonstration

Next Steps

Physical

~ the interplay between 'gesture' and 'touch'. How and why do we need our hands to control some things in detail? [video =>]

~ finger, hand and gesture recognition

~ some gestures are full of meaning, others should be ignored. How to tell the difference?

Musical

~ multiple parts all generated live: 'group' structured improvisation

~ rhythmic synchronisation across parts and groups

~ dynamics, phrasing, annotation: more use of augmented score features and experiments in how they can be used

~ investigating the balance between composition, performance and improvisation

Technical etc.

~ machine listening

~ live coding of 'real' performance

~ therapeutic uses (gismos)

~ pedagogical uses, maybe particularly support for sight-reading and improvisation

XboxViewTV
YouTube

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Thankyou

~ any questions?

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