

“ 18th Feb 63
 Notation is a way of making people move. If you lack others, like aggression or persuasion. The notation should do it. This is the most rewarding aspect of work on a notation. Trouble is just as you find your sounds are too alien, intended for a different culture, you make the same discovery about your beautiful notation: no-one is willing to understand it. No-one moves.”

Cornelius Cardew,
 from Treatise Handbook, 1971

Ways of Making People Move

composing, mapping and interpreting using live generation of augmented musical scores

Notation in Contemporary Music Symposium
 Goldsmiths, London
 October 2013

Richard Hoadley
 Digital Performance Laboratory
 Anglia Ruskin University

Three Streams

algorithms (patterns)
 physicality (via microprocessors, etc.)
 representation (notation)

(representing musical composition and performance)

Notation/representation

Performances



[to display, or not to display, the notation?]

Performing Performances

Cadogan's Work
 18th Feb 2013, University of London
 18th Feb 2013, October 2013

Quartet
 18th Feb 2013, University of London
 18th Feb 2013, October 2013

Demonstration

Thank you
 for your interest

contact:
 Richard Hoadley
 or
 Richard Hoadley
 for more information at
www.digitalperformance.org

Ways of Making People Move

composing, mapping and interpreting using live
generation of augmented musical scores

Notation in Contemporary Music Symposium
Goldsmiths, London
October 2013

Richard Hoadley
Digital Performance Laboratory
Anglia Ruskin University



“

8th Feb 63

Notation is a way of making people move. If you lack others, like aggression or persuasion. The notation **should** do it. This is the most rewarding aspect of work on a notation. Trouble is: Just as you find your sounds are too alien, intended 'for a different culture', you make the same discovery about your beautiful notation: no-one is willing to understand it. No-one moves.

”

**Cornelius Cardew,
from Treatise Handbook, 1971**

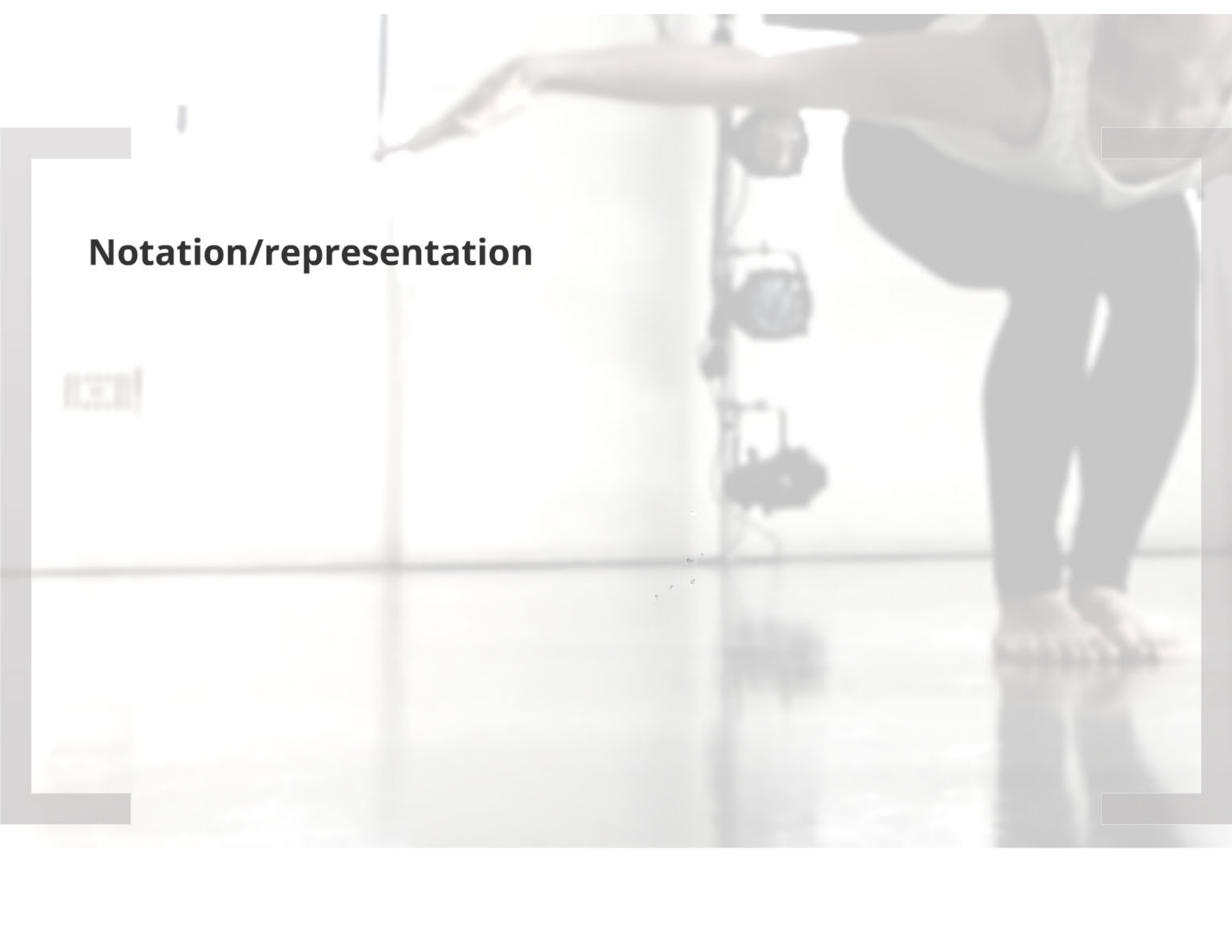
Three Streams

algorithms (patterns)
physicality (via microprocessors, etc.)
representation (notation)

(representing musical composition and
performance)

Related work: algorithms
Kramer et al., "A practical approach to developing
new algorithms for the study of musical
structure"
Kramer et al., "The Analysis of Musical
Structure: Organizational Issues"
Kramer et al., "Toward a Theory of Musical
Structure: An Algorithmic Approach"
Kramer et al., "Toward a Theory of Musical
Structure: An Algorithmic Approach"
Kramer et al., "Toward a Theory of Musical
Structure: An Algorithmic Approach"
Kramer et al., "Toward a Theory of Musical
Structure: An Algorithmic Approach"

Notation/representation



Richard Hoadley

Four Archetypes, 1995

Handwritten musical score for "Four Archetypes" by Richard Hoadley, 1995. The score is written on three systems of staves, each system containing three staves (1, 2, 3). The tempo is marked $\text{♩} = 110$. The key signature is one sharp (F#).

The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamics are marked as *mf* (mezzo-forte), *p* (piano), and *f* (forte). The parts are labeled with *sotto* (soprano) and *sopra* (soprano) in the first system, and *sopra* and *sotto* in the third system. The score is written in a handwritten style on aged paper.

Notation

- complex semantic and graphic 'language'
- not really suited to non-specialised environments
- many challenges in electronic implementation and display

Why?

- to unify dots and signals: enriching electronic music with live performance and algorithmic patterning [quote]
- to investigate links between 'technologies' and approaches: mapping between domains: algorithm and physical gesture into live notation: understanding which gestures have 'meaning' and which don't
- to investigate liveness in music performance and improvisation
- to learn about and analyse compositional processes through automation
- ...as a consequence and to clarify, it's a technique **and** a tool, just as these compositions are both pieces and experiments

Dots and signals

'Music processing', in the way that this community uses it, denotes the processing of music information, which is stored in its structured symbolic musical 'Gestalt'. The term 'music processing' implies a difference from the signal processing community, in that it does not deal with sound as the source material for investigation, but deals with music as score or music as timebased structure stored in a symbolic form, such as codes, languages, etc. Obviously the boundary between signal and 'music processing' can become very blurred, but it is useful to mention this division as it seems that the research, its communities and their methodologies tend to be different and do not overlap in a major way.

Carola Boehm, Book Review, Organised Sound 7(1): 79-82, 2002

The tools...

provide a structure for the generation of
music and/or common practice notation
(plus) according to stylistic rules

facilitate communication between
SuperCollider and INScore

<http://supercollider.sourceforge.net/>



<http://inscore.sourceforge.net/>



<http://rheadley.net/inscore> (from April
2014)

eventually, maybe, offer the beginnings
of a more standard interface for physical
mapping

Peer comment and criticism

- machine musicianship as a compelling reason for using real-time notation
 - concern over possible difficulties in keeping track of one's place in the score
 - concern over the feasibility of an 'accurate' and structured rendition
 - concern over lack of rehearsal, familiarity and even the status of the performer
- > musicians who have tried this do not agree with many of these comments

Performances

Gaggle @ HCI conference, Cambridge 2009



www.youtube.com/watch?v=3J50L_0_000

Gaggle @ Museums, interfaces, spaces, technologies, 2010



www.youtube.com/watch?v=7Ht1qP1_0_000

Gaggle v2



The Fluxus Tree, LIPAM, Leeds, September 2012



www.youtube.com/watch?v=7Ht1qP1_0_000

The Fluxus Tree, Incline Symposium, Coventry University, 2012



www.youtube.com/watch?v=7Ht1qP1_0_000

Triggered, Kings Place, London, 2011



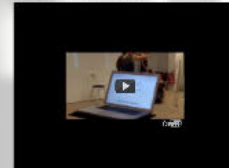
www.youtube.com/watch?v=7Ht1qP1_0_000

Public Interactions with the Fluxus Tree at the Cambridge Festival of Ideas, October 2012



www.youtube.com/watch?v=7Ht1qP1_0_000

Quantum*, Sensations Festival, Empty Shop, Meadows Shopping Centre, Chelmsford, Sunday September 28th 2013



www.youtube.com/watch?v=7Ht1qP1_0_000

[to display, or not to display, the notation?]

Gaggle @ Museums, interfaces, spaces, technologies, 2010



You Tube

www.youtube.com/watch?v=FroFT1vHU0

Triggered, Kings Place, London, 2011



www.youtube.com/watch?v=W3vnuA3torc

The Fluxus Tree, LIPAM, Leeds, September 2012



You Tube

www.youtube.com/watch?v=wH0mjb-jf8Q

Quantum², Sensations Festival, Empty Shop, Meadows
Shopping Centre, Chelmsford, Saturday September 28th 2013



You Tube

www.youtube.com/watch?v=-mq6ejdP0hg

Forthcoming Performances

Calder's Violin

INTIME Symposium, Coventry

1600 20th October 2013

Quantum²

Ruskin Gallery, Cambridge Festival of Ideas

1930 27th October 2013

Demonstration



Thank you

any questions?

contact:

richard.hoadley@anglia.ac.uk

or

research@rhoadley.net

this presentation is available at

<http://rhoadley.net/presentations>