

Sculpture as music interface

Fine Arts Research Unit
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v002

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this presentation is available at:
<http://rheadley.net/presentations>

Why?

I have always felt that music in performance is highly visual (Charlotte Green, but note 'cinema of the mind')

musical instruments are physical, visual entities; these and other references to and metaphors of music are commonly used in visual and graphic arts (Picasso, Matisse, Klee, Mondrian, Christian Marclay, Norman Maclaren)

music scores are intriguing graphically; many musicians (Satie, Cardew) and artists (Kandinsky) have exploited this

musical instruments are finite pieces of physical technology. Those who are skilled at playing have something solid to push against (unlike computers); this physicality implies a physical form, the style and functionality of which has an aesthetic, sculptural perspective.





Charlotte Green, Saturday Live, BBC
Radio 4, 19th January 2013

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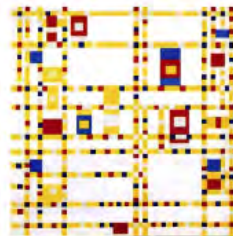
Picasso, Matisse

Matisse 'Nude' (1919) & Picasso 'Sevillana' (1942)



Mondrian

Broadway Boogie Woogie (1942-43)



Norman MacLaren

Beginne Dull Care (1949)



Klee

videtur pinxit Peas (1933)



Christian Marclay

Band 302, including "Pinxat" (2000), "Dromer" (1999) and "Up Lock" (1991)



<http://vimeo.com/60121880-67/cristian-marclay-presentation>

Picasso, Matisse

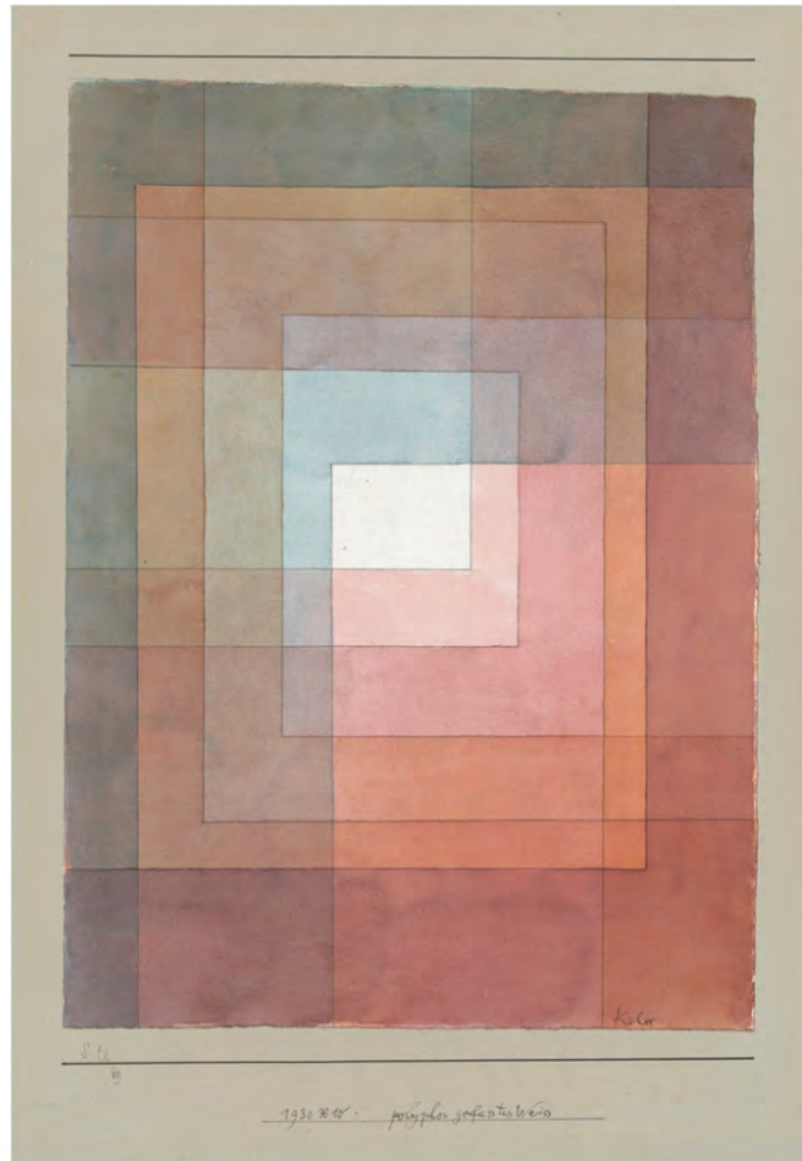
Matisse 'Music' (1939) & Picasso 'Serenade' (1942)

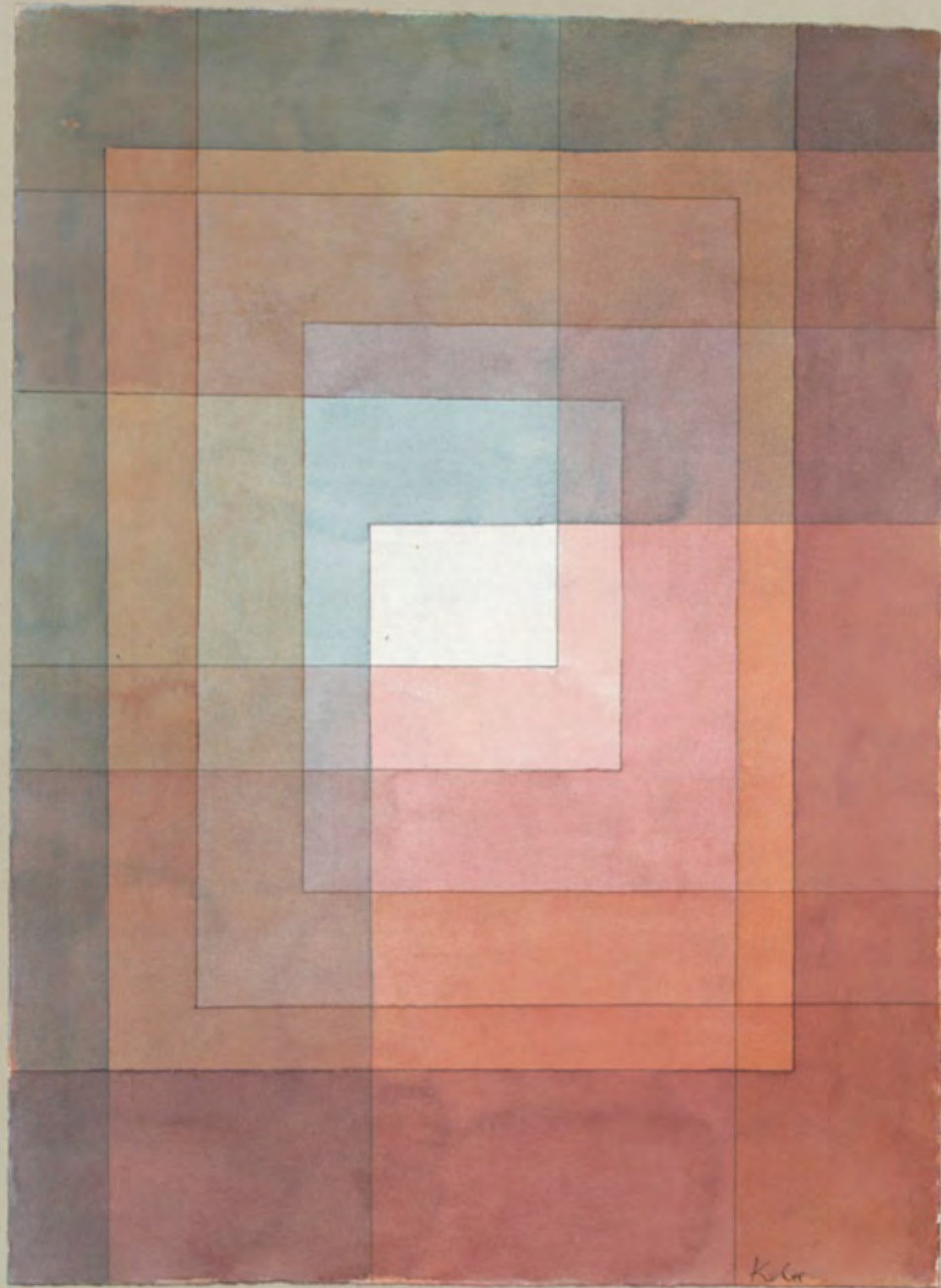




Klee

polyphon gefasstes Weiss (1930)





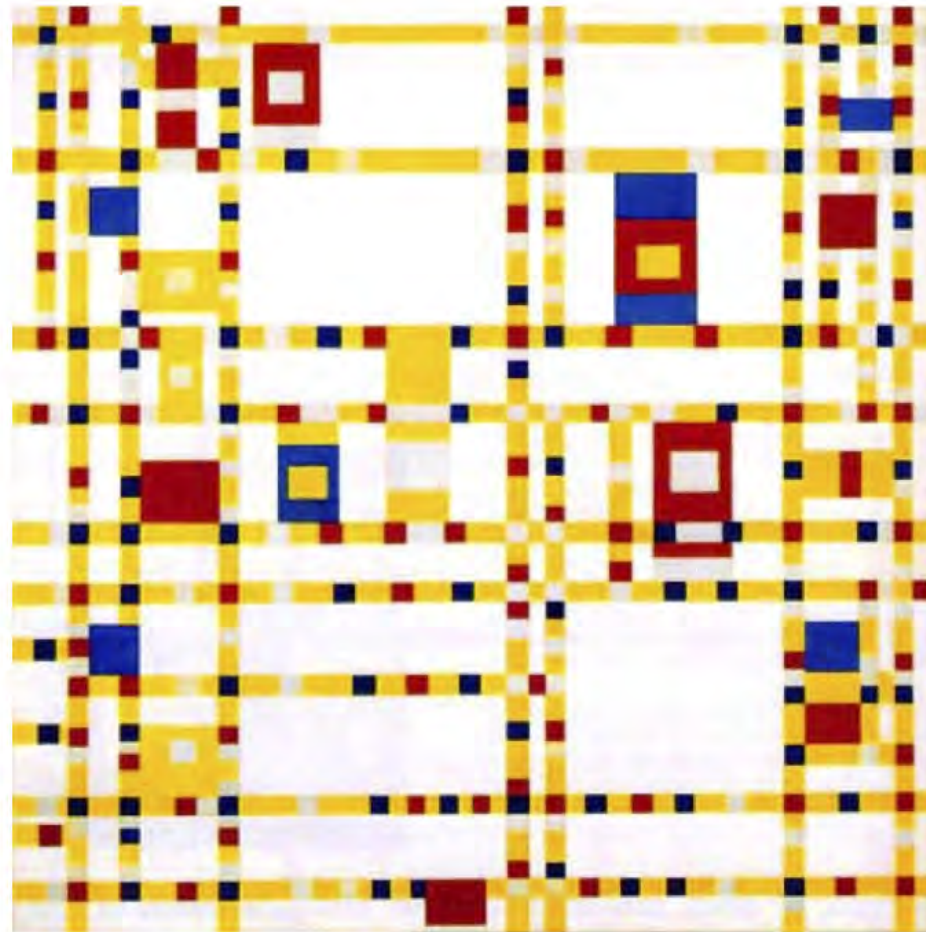
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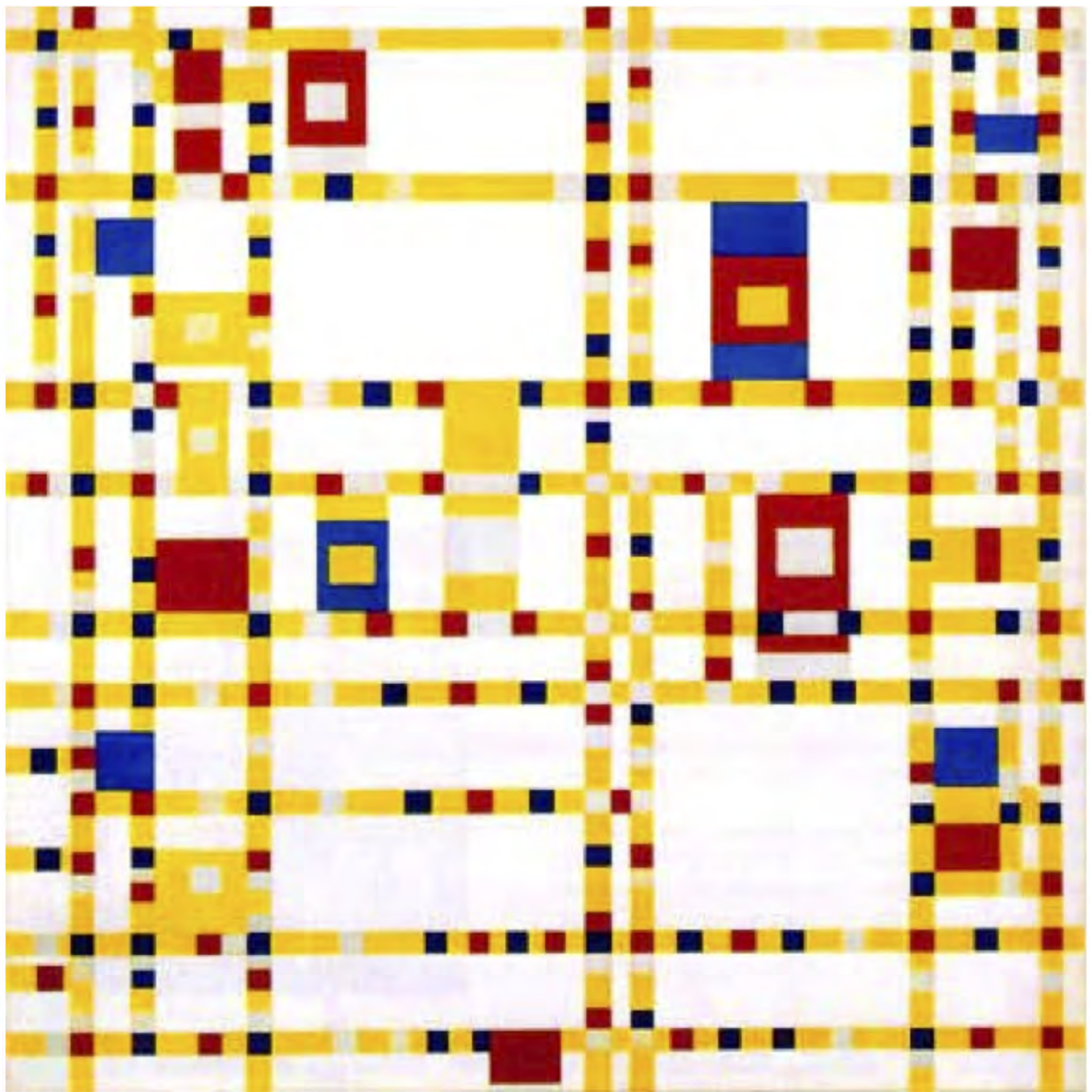
1930 * 10. piet Mondriaans werk

K. L. K.

Mondrian

Broadway Boogie-Woogie (1942-43)





Christian Marclay

Band, 2002; including "Virtuoso" (2000), "Drumkit" (1999) and "Lip Lock" (1992)



<http://prezi.com/kw1zidlk0-b7/christian-marclay-presentation/>



Norman Maclaren

Begone Dull Care (1949)





You Tube

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Richard Hoadley, Four Archetypes, 1995

Handwritten musical score for "Four Archetypes" by Richard Hoadley, 1995. The score is for a string quartet, consisting of two violins, two violas, and two cellos. It features a tempo marking of quarter note = 110 and various dynamic markings such as *mf*, *p*, *p sotto*, and *f sopra*. The notation includes complex rhythmic patterns, slurs, and dynamic changes across multiple staves.

Richard Hoadley, Four Archetypes, 1995

$\text{♩} = 110$

The image shows a handwritten musical score for a string quartet, titled "Four Archetypes" by Richard Hoadley, 1995. The score is written on five systems of staves. The first system contains three staves (1, 2, 3) and the second system contains three staves (1, 2, 3). The third system contains three staves (1, 2, 3) and the fourth system contains three staves (1, 2, 3). The score is in 4/4 time and features a variety of dynamic markings and articulations. The tempo is marked as $\text{♩} = 110$. The key signature is one sharp (F#). The score includes dynamic markings such as *mf*, *p*, *p sotto*, and *mf sopra*. The notation includes eighth notes, quarter notes, and half notes, with some notes beamed together. There are also some handwritten annotations and corrections throughout the score.

Eric Satie

Verset laïque & somptueux (Sumptuous lay verse),
1900

VERSET LAÏQUE & SOMPTUEUX

Réflexion

Autrement

Sa-même

ERIK SATIE †

ARCEUIL, SEINE, 5 Aout 1900.

The image shows a handwritten musical score on aged paper. At the top, the title 'VERSET LAÏQUE & SOMPTUEUX' is written in a decorative, calligraphic hand. Below the title, the score is organized into three systems of staves. The first system is labeled 'Réflexion' and features a treble clef, a key signature of one sharp (F#), and a 3/4 time signature. The second system is labeled 'Autrement' and continues the musical notation. The third system is labeled 'Sa-même' and concludes with a double bar line. In the center of the page, the name 'ERIK SATIE' is written in large, bold, block letters, followed by a large cross symbol. At the bottom right, the date and location 'ARCEUIL, SEINE, 5 Aout 1900.' are handwritten.

VERSET LAÏQUE & SOMPTUEUX

Réflexif



Handwritten musical notation for the 'Réflexif' section, consisting of two staves with notes and rests.

Autrement



Handwritten musical notation for the 'Autrement' section, consisting of two staves with notes and rests.

Soi-même



Handwritten musical notation for the 'Soi-même' section, consisting of two staves with notes and rests.

ERIK SATIE †

ARCEUIL, SEINE, 5 Aout 1900.

Kandinsky

Composition 7 (1913)





Cornelius Cardew

Treatise (1963-67)





YouTube

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Music and signal processing

‘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

How? Techniques...

...investigate and implement:

- automated, algorithmic composition
- physical computing and interactivity
- considerations of aesthetic design, mapping and affordance (almost by accident)
- also more recently adds the ability to use notation

Changes to notions of composition

"Formerly when one worked alone, at a given point a decision was made, and one went in one direction rather than another; whereas, in the case of working with another person and with computer facilities, the need to work as though decisions were scarce - as though you had to limit yourself to one idea - is no longer pressing. It's a change from the influences of scarcity or economy to the influences of abundance and - I'd be willing to say - waste."

John Cage quoted in OMI 16:4 by Larry Austin

"Computers are bringing about a situation that's like the invention of harmony. Subroutines are like chords... [] and []... are altered by a single punch. We're getting music made by man himself, not just one man."

John Cage, 1969

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John Cage, 1969.

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 2013)

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

algorithms might be...

top down
bottom up
hybrid
bespoke



Mark Franz, 1997, Mathematics and Art

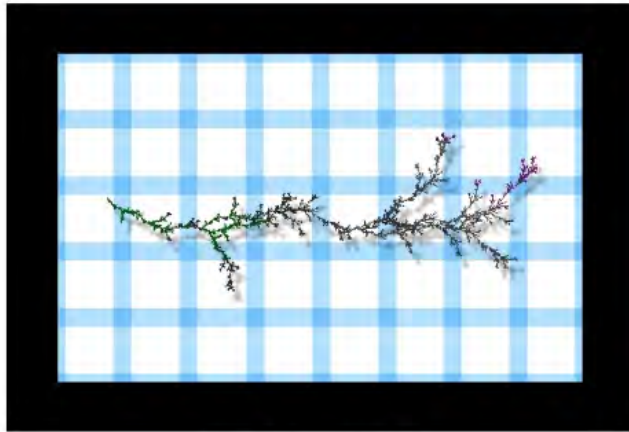


Figure 1. *Vine and Tablecloth*



Figure 11. A landscape made from IFS attractors.

Mark Franz, 1997, Mathematics and Art

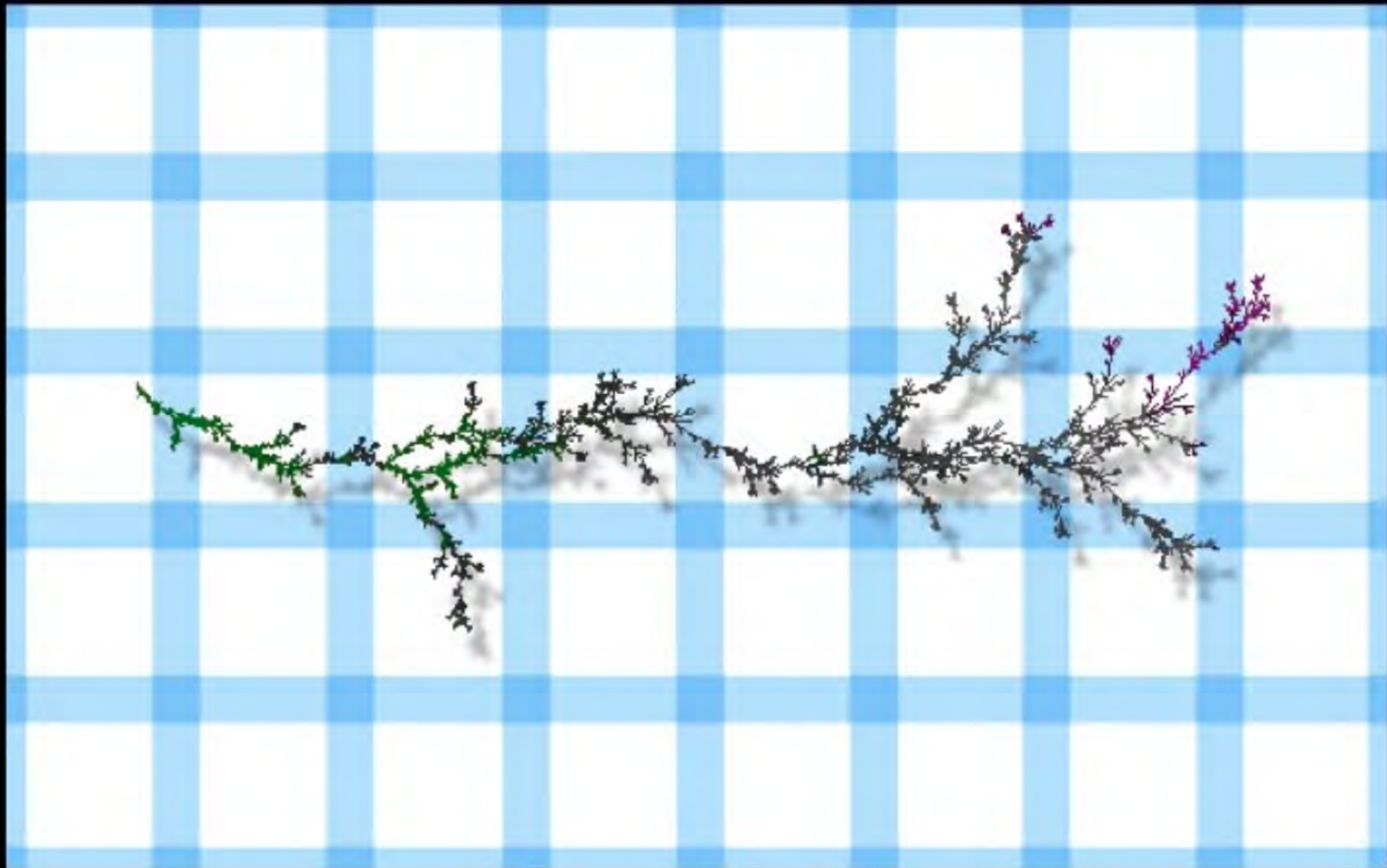


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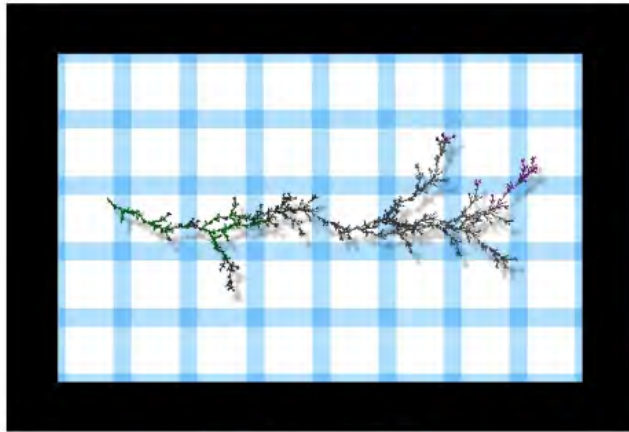


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Figure 11. A landscape made from IFS attractors.

Mark Franz, 1997, Mathematics and Art

Performances



Gaggle @ HCI conference, Cambridge 2009

Museums, interfaces, spaces, E... 2010



Triggered, Kings Place, London, 2011



The Fluxus Tree, LIPAM, Leeds, September 2012



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



The Fluxus Tree, Intime Symposium, Coventry University, 2012



Installation only, from ENTME Symposium, Coventry University, September 2012

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



Gaggle @ HCI conference, Cambridge 2009

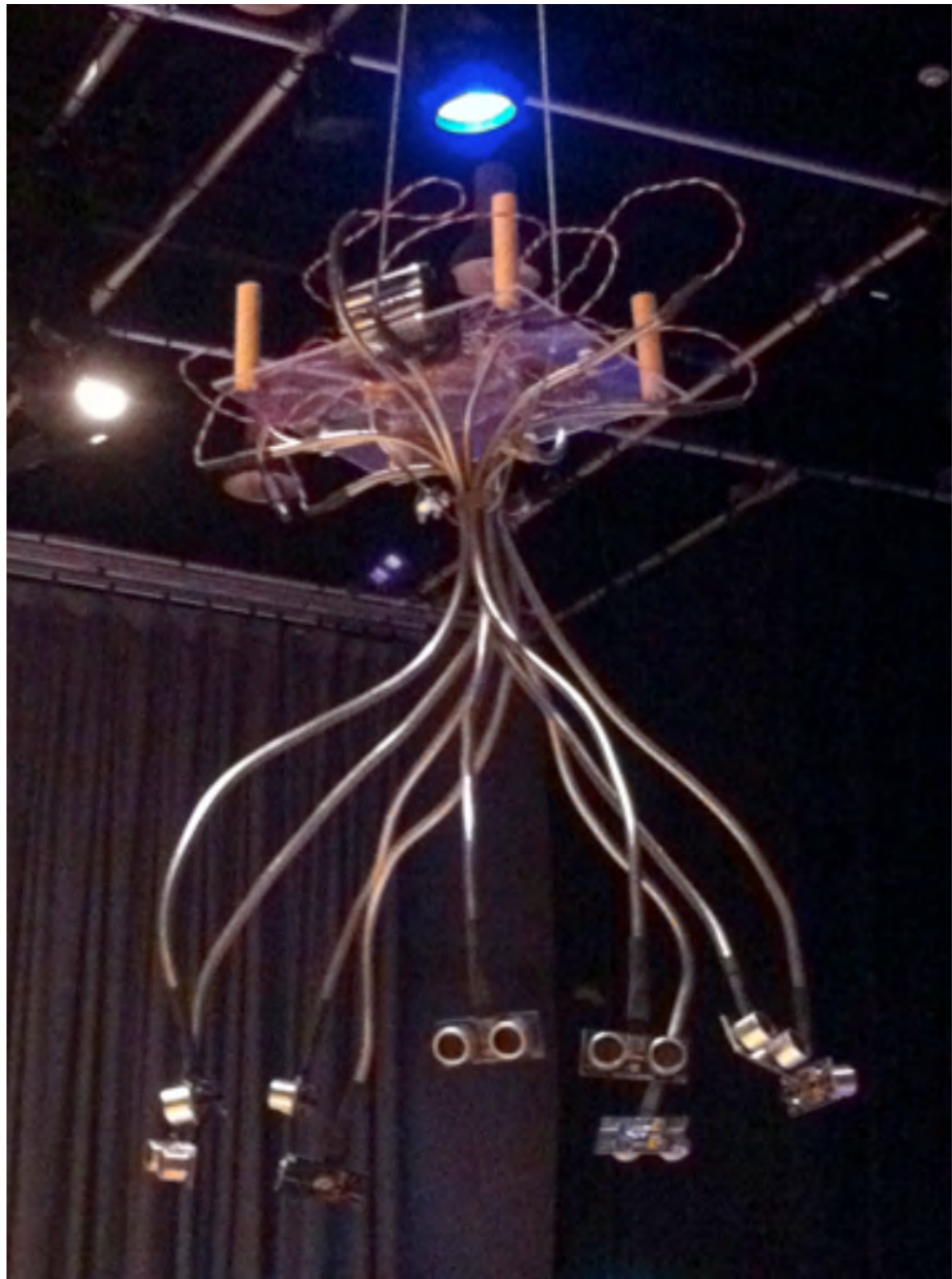


YouTube

Museums, interfaces, spaces, t...., 2010









Triggered, Kings Place, London, 2011



4: Metapiano





You Tube

The Fluxus Tree, LIPAM, Leeds, September 2012



YouTube



The Fluxus Tree, Intime Syposium, Coventry University, 2012



YouTube



notation only, from INTIME Symposium, Coventry University, September 2012



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





YouTube

Demonstration



Next steps

new materials, new ideas, new ways of acquiring data, etc...

multiple parts all generated live: 'group' structured improvisation

rhythmic synchronisation across parts and groups

dynamics, phrasing, annotation...

investigating the balance between composition, performance and improvisation

machine listening

live coding of 'real' performance

'The Fluxus Tree' (composition) and 'Hands' (gismo) show, amongst other things, the importance of some gestures, and yet the fact that they shouldn't all be taken into account

it's clear that physical mappings are not understood: experimenting in 'The Fluxus Tree' has revealed many different methods and possibilities

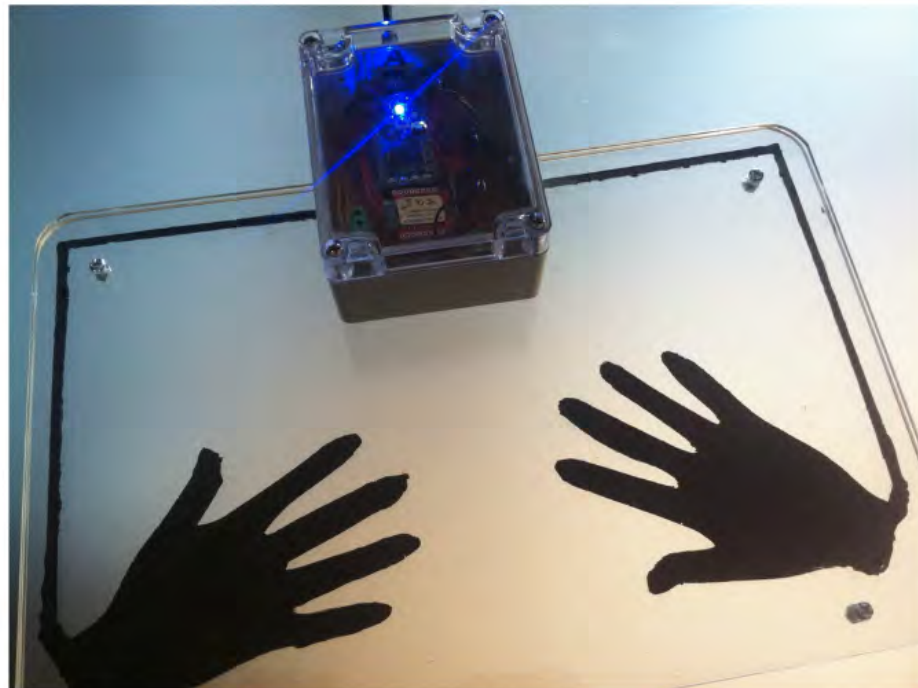
therapeutic uses (gismos)

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

Touching Sound and Gismos...

Generic Interfaces for Socio-musical Orientation

Computer Supported Cooperative Work



Upcoming events

paper: "live, algorithmically generated notation, creativity and performance"

cambridge centre for musical performance as creative practice (cmpcp) performance studies network international conference
cambridge uk, 4-7 april 2013

performance: "three streams for gesture and 'cello"

cmpcp performance studies network international conference
cambridge uk, 4-7 april 2013

performance: "the fluxus tree"

a part of musichoreography: duets for dancers and musicians
kings place, london, april 14 2013

Thankyou

any questions?

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this presentation is available at

<http://rheadley.net/presentations>