Performing Computer Music

a Time and Motion Study

- Movement and embodiment in music
- The role of movement in the development of music technology
- Examples, possible future developments, benefits and problems inherent in the use of movement in music technology

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Movement in Music

- Two types of movement:
    - Movement required to operate the technology
    - Expression - voluntary or involuntary
- Examples...

Movement in Music

Bach *Brandenburg Concerto No 5* BWV1050 Michael Behringer: Cembalo

- Poise and formality
- Calm
- Dress

Movement in Music

Itzhak Perlman: Bazzini ‘La Ronde des Lutins’

- Expression fixed
- Virtuosic

Movement in Music

Kraftwerk *The Robots* 1978

- Technology and mechanisation
- Formal clothing
- Fixed expression
- Not exuberant

Movement in Music

- Laurie Anderson *O Superman (For Massenet)* 1981

- Formal attire (androgynous)

- Expressionless

- No movement, little ‘performance’

Movement in Music

- Informal dress
- Excitement
- Lack of self-consciousness
- Virtuosic?

Movement in Music

Hendrix *Star Spangled Banner*
Woodstock 1969

- Exuberant and flamboyant in behaviour and dress

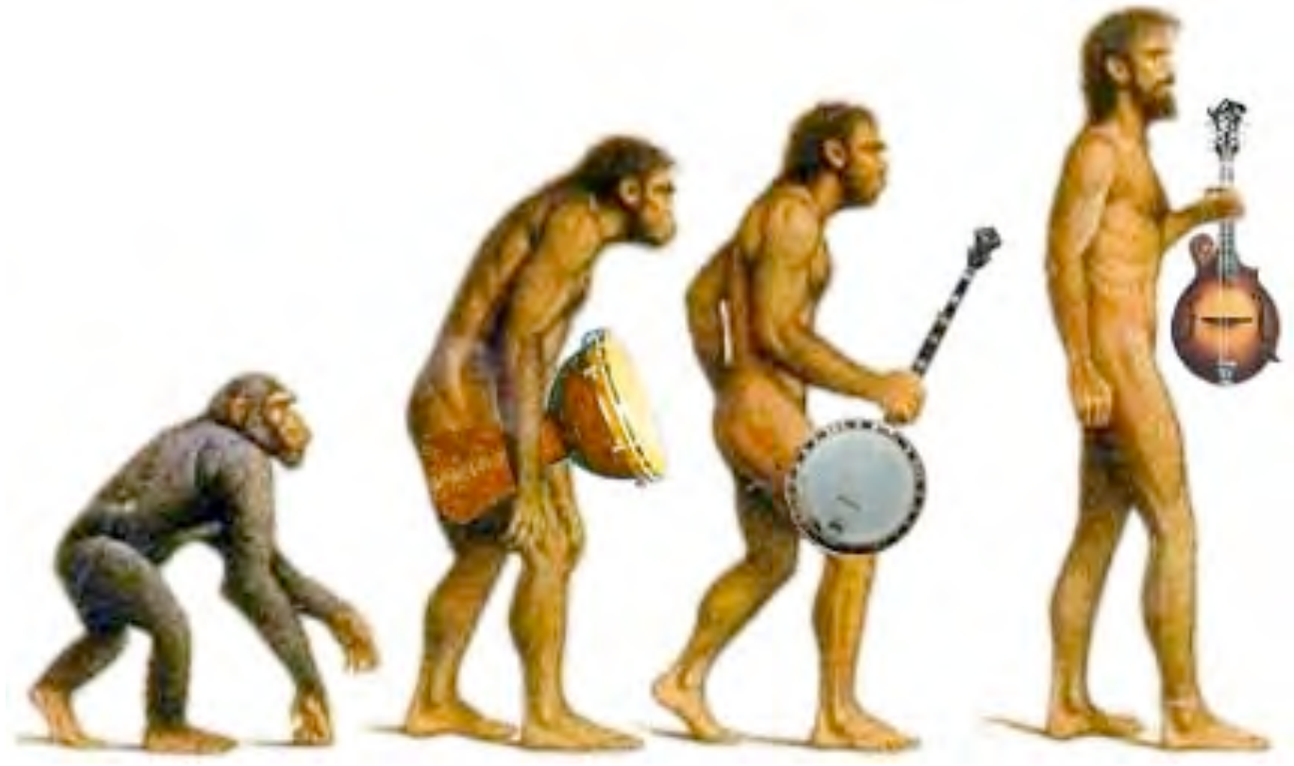
- Visceral

- Virtuosic (although electronic)

Movement in Music

Conclusions

- Performance and performability
- Doing things in public (social issues)
- Evolutionary issues
- Greater technical prowess over time (as athletics)
- Virtuosity is only possible because of the finite nature of performer and instrument



2: Movement in Electronic Music

Computer processing

Note *Kraftwerk* and *Laurie Anderson:* Synthesis and synthesisers

Hybrid systems

Tape

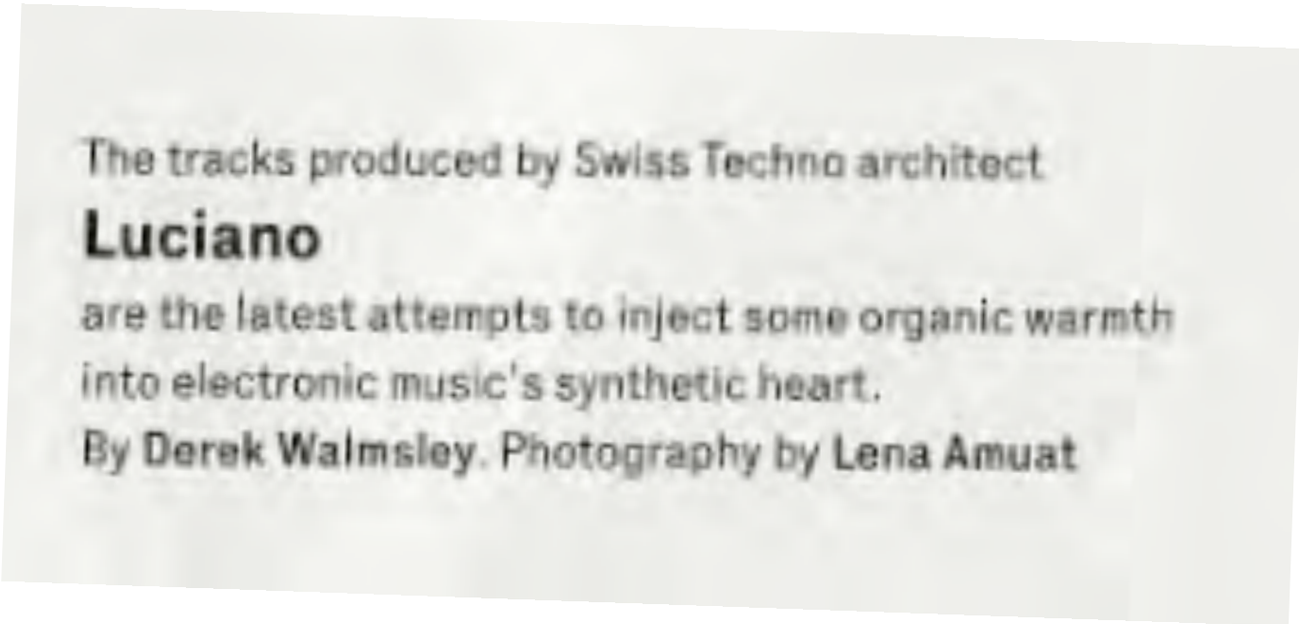
“Electronic Music’s Synthetic Heart”

- In the past the ‘synthetic heart’ has inspired: reduced listening, acousmatics, the imaginary cinema...

- Has the value of ‘synthetic’ things changed?

- There are some signs of disenchantment from both audiences and practitioners, but more importantly other, more live and hybrid forms, are becoming increasingly popular.

- from The Wire 297, November 2008

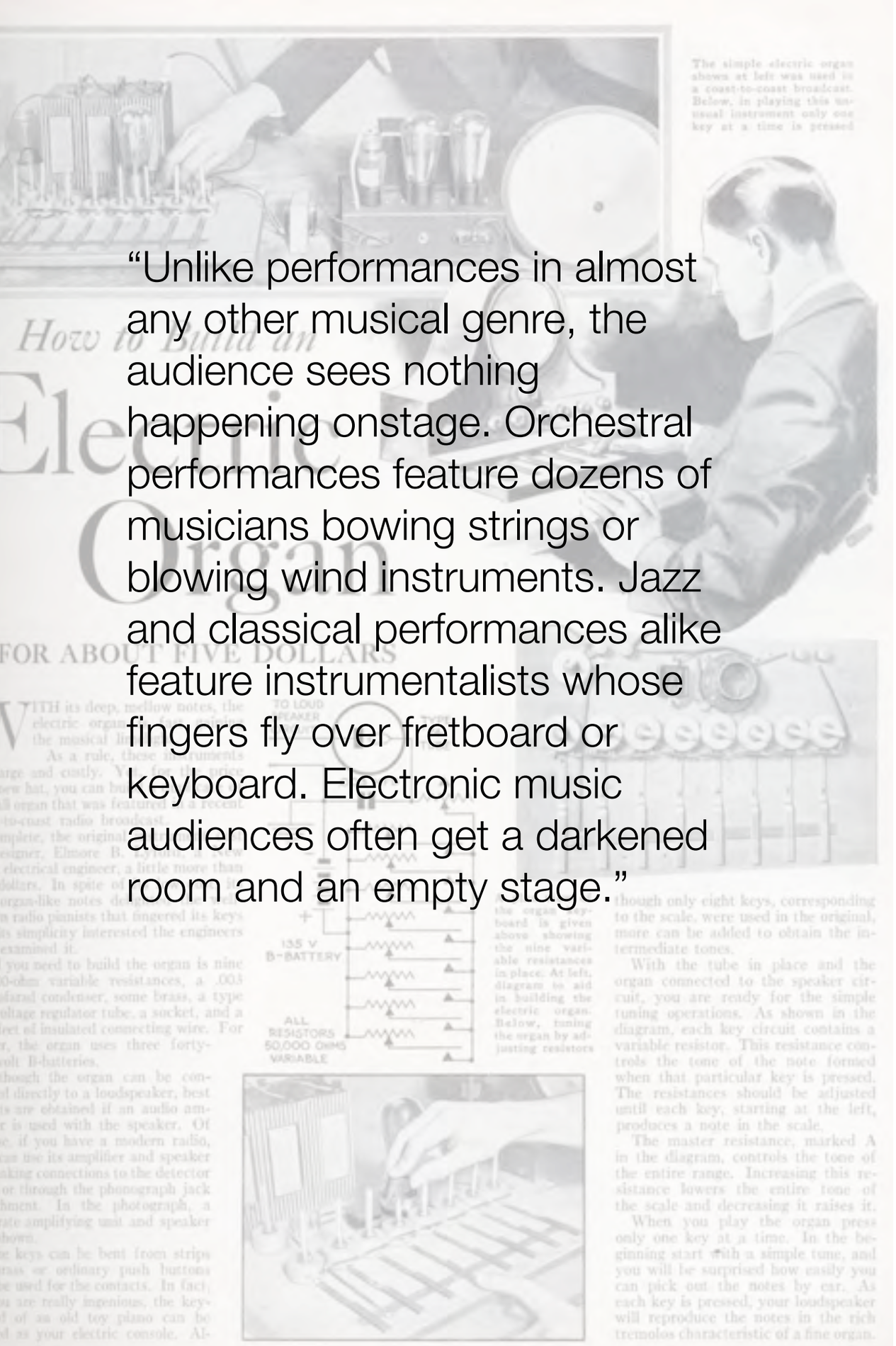


The tracks produced by Swiss Techno architect

Luciano

are the latest attempts to inject some organic warmth into electronic music's synthetic heart.

By **Derek Walmsley**. Photography by **Lena Amuat**



"Unlike performances in almost any other musical genre, the audience sees nothing happening onstage. Orchestral performances feature dozens of musicians bowing strings or blowing wind instruments. Jazz and classical performances alike feature instrumentalists whose fingers fly over fretboard or keyboard. Electronic music audiences often get a darkened room and an empty stage."

Just 'Press Play'

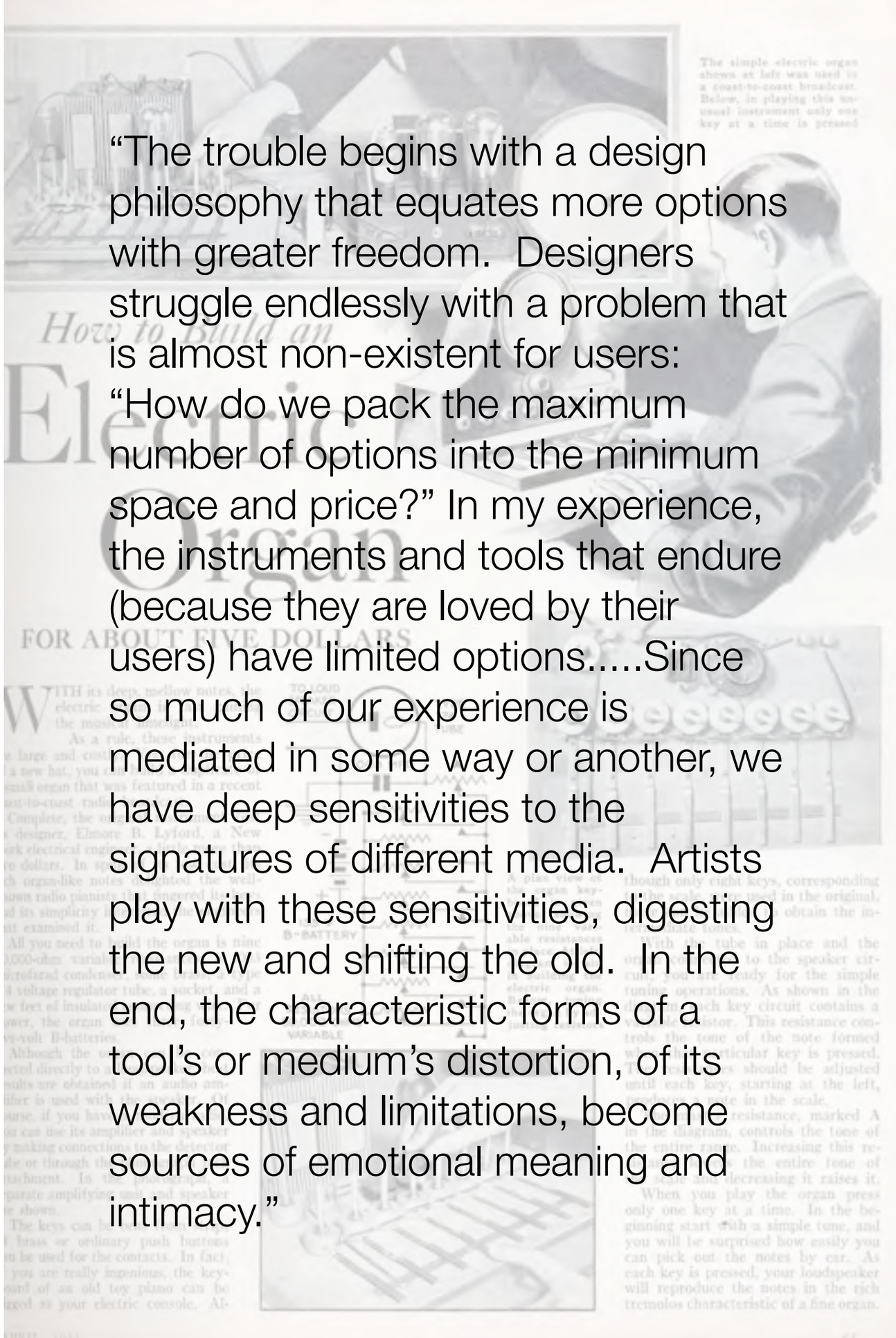
- From "Just Press Play: the Challenges of Performing Electronic Music in Singapore": http://emlblog.blogspot.com/2005/04/just-press-play-challenges-of.html, April 2005

- There is very little movement in most purely electronic music. Even popular examples suggest that electronic sounds don't encourage movement!

Brian Eno

- Brian Eno, *The Revenge of the Intuitive*, Wired, January 1999

  http://www.wired.com/wired/archive/7.01/eno.html



"The trouble begins with a design philosophy that equates more options with greater freedom. Designers struggle endlessly with a problem that is almost non-existent for users: "How do we pack the maximum number of options into the minimum space and price?" In my experience, the instruments and tools that endure (because they are loved by their users) have limited options.....Since so much of our experience is mediated in some way or another, we have deep sensitivities to the signatures of different media. Artists play with these sensitivities, digesting the new and shifting the old. In the end, the characteristic forms of a tool's or medium's distortion, of its weakness and limitations, become sources of emotional meaning and intimacy."

"After 50 years, tape music suffers from a wallflower-like existence, not being performed in concerts and radio programs. On the other hand, we cannot ignore the fact that a piece for instruments like *Quatuor pour la fin du temps* sounds fresh "like a young day." The continuous evocation of specific names from the early times of electronic music asks the question where are the real nostalgics? Of course, a lot of effort is made to add new dimensions to electroacoustic music—for example, with spatial qualities. But one should not be tricked. The spatialization of music is a superficial quality that seems to be attractive at first but quickly loses its excitement for the experienced listener."

York Holler

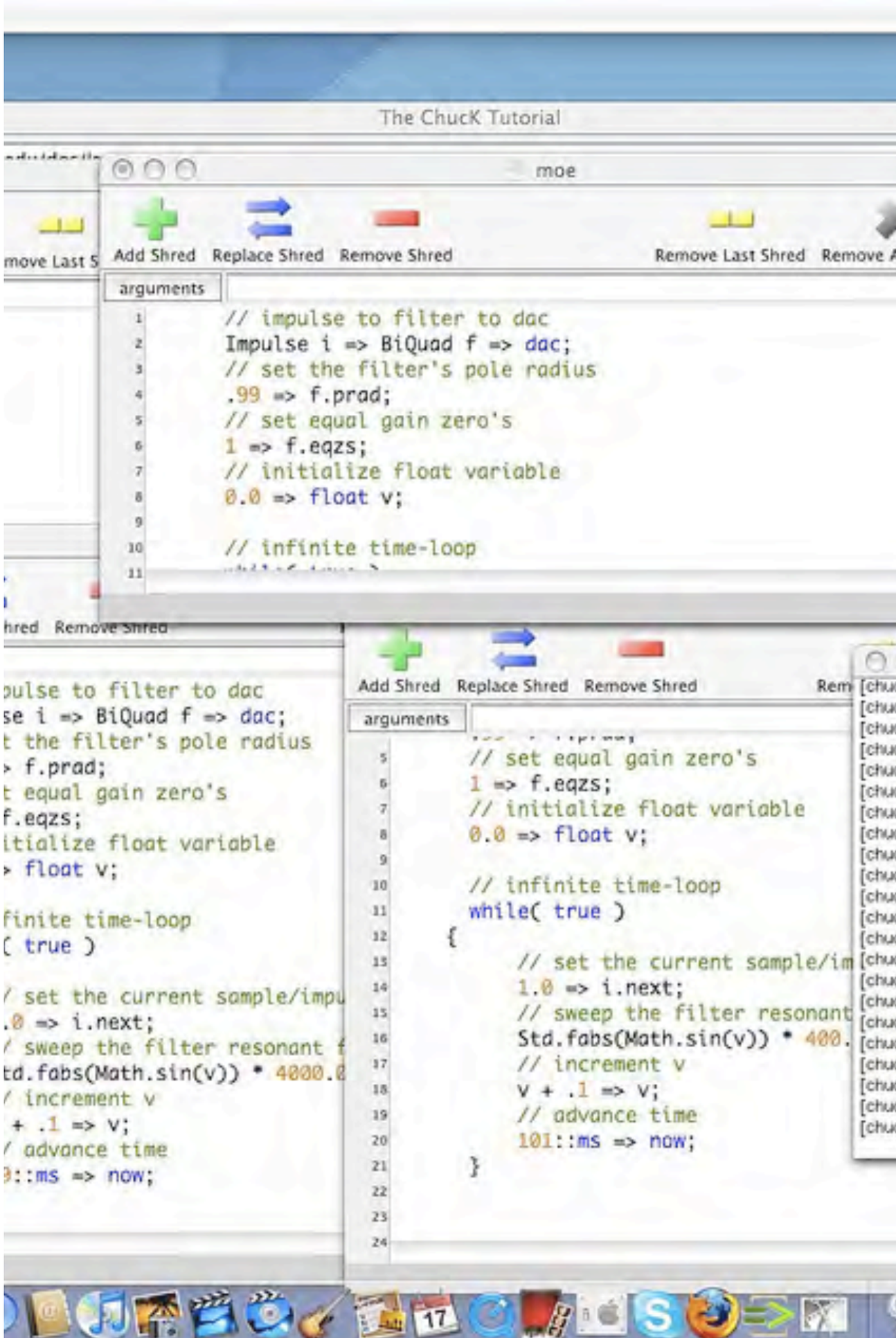
- Computer Music Journal, 2001, vol 25 no 4, Letters
  York Höller, quoted from Musike Texte 88, Cologne:

- NB (Irritated) responses from many including Francois Bayle, Jonty Harrison, Jean-Claude Risset and Karlheinz Stockhausen...

3: Movement and the HCI

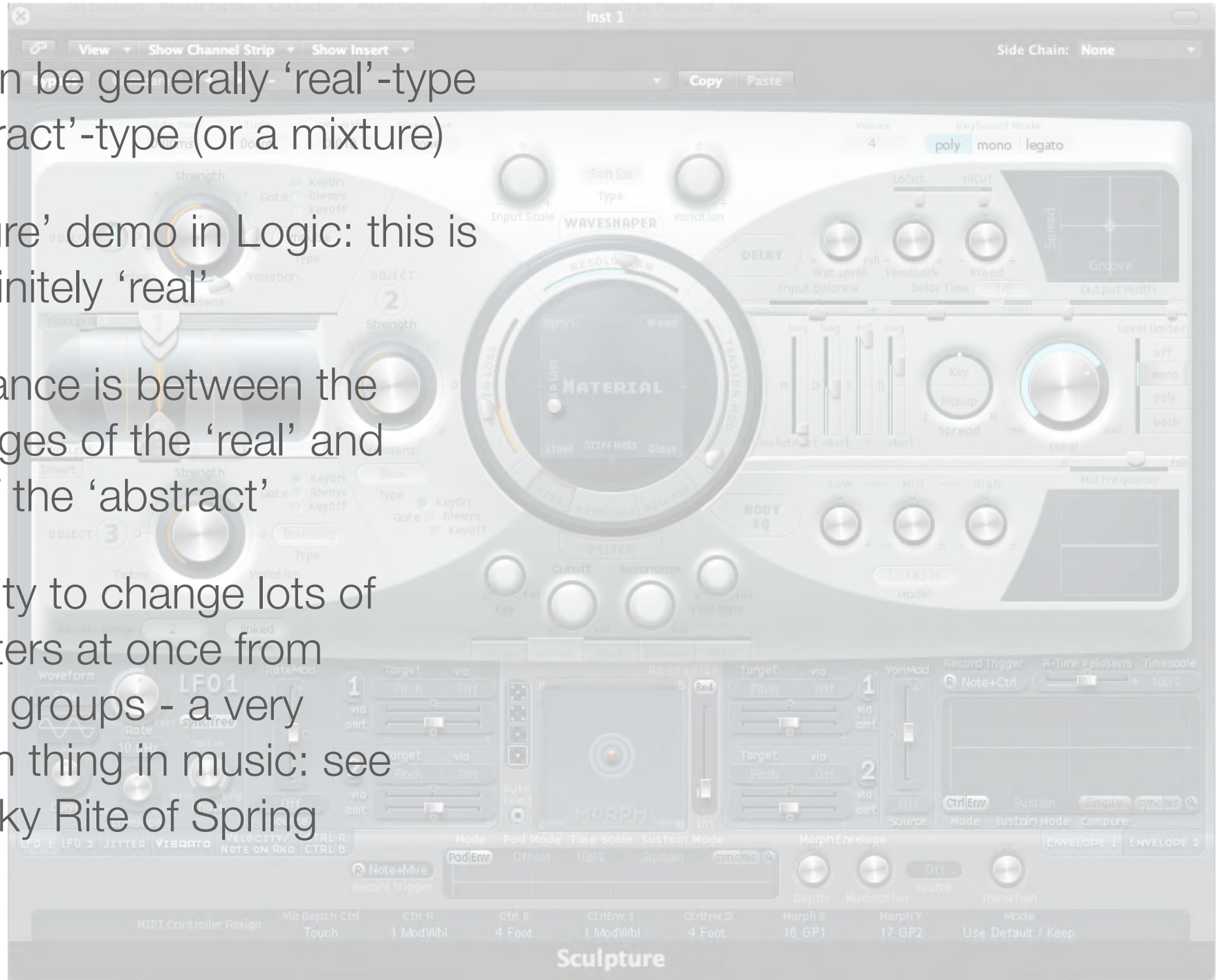
The HCI is one of the central issues in computing

For many years GUIs have become more sophisticated and ‘realistic’...



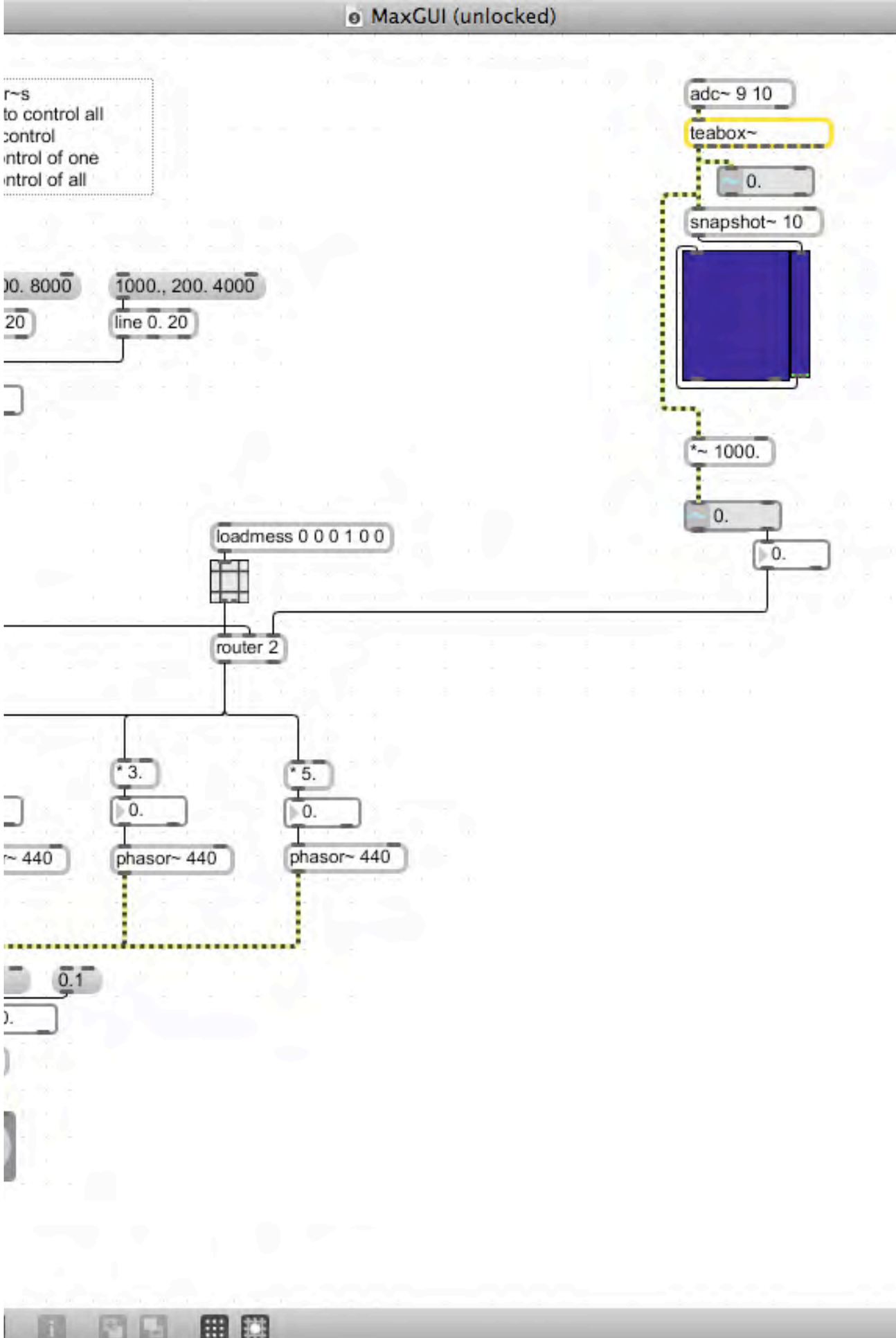
GUI examples

- GUIs can be generally ‘real’-type or ‘abstract’-type (or a mixture)
- ‘Sculpture’ demo in Logic: this is very definitely ‘real’
- The balance is between the advantages of the ‘real’ and those of the ‘abstract’
- The ability to change lots of parameters at once from different groups - a very common thing in music: see Stravinsky Rite of Spring



GUI demonstration

- Levels of control
- Logic (‘real’-type: see previous)
- MaxMSP (‘real’-type but customisable)
- SuperCollider (code (‘abstract’-type) but customisable and with the ability to create a GUI)



HCI Demonstration

- Data Glove and SuperCollider

Possible futures and possible problems

- Sensual devices
- Other studies: McGurk (1976), Libet (1976) and Cornhuber (1979) indicate links and dichotomies between the senses and their mutual support.
- Economic/military/games development
- Artificial Intelligence