SM4143 Sonic Arts & the History of Sounds and noises
[Notes on Meeting #6, October 23, 2006 / Cedric Maridet]

“A musical notation is a language which determines what you can say, what you want to
say determines your language.”

Introduction: reflection upon last week’s performance

After the performance attempt of week 5, where one of the idea was to find a possible
organization of sounds, interactions between players, we might get some insight through the
He was part of the British experimental artists, contemporary of Stockhausen and Cage (one
of his great influence.) He was one the most prominent avant-garde composer and founded
many influential improvisation groups like the Scratch Orchestra. He wrote Treatise
(1963-67) a 193 pages graphic score, and The Great Learning (1968-1971). The sections of
the latter work comes from the different practices of the Scratch Orchestra: “Compositions,
Improvisation Rites (activities which are not compositions in themselves but which can
facilitate improvisation), Scratch Music (a kind of apprenticeship programme in which pieces
are written first as solos which then act as accompaniments to other solos), Popular Classics
(previously written pieces which are known well enough to be improvised upon), and
Research Projects” (from http://www.users.waitrose.com/%7echobbs/Chinesegl.html
http://www.spiralcage.com/improvMeeting/treatise.html (guide to Treatise)
Cardew questioned how to interpret the score through a reflection upon the score prior to the
performance then raises the question of how to perform it.

"Reflection before a performance. A musical score is a logical construct inserted into the mess
of potential sounds that permeate this planet and its atmosphere."
- Cornelius Cardew, Treatise Handbook, p.vii col. 2 pp.5

"Performance advice. Divide the musicians into those involved in dot events (percussionists
and pianists?) and those involved in line events. Dot events to be exclusively soft."
- Cornelius Cardew, Treatise Handbook, p.vii col. 2 pp.4

In the Treatise Handbook, Cardew dealt with issues on improvisation and identified different
virtues to be developed by a musician:
- simplicity
- integrity (importance of the making of the sound, being the sound)
- selflessness
- forbearance (accept everyone’s frailties)
- preparedness (for any eventualty)
- identification with nature
- acceptance of death
(http://www.ubu.com/papers/cardew_ethics.html)
Western music notation: characteristics and implications.

For long music was a visual creation for which the medium of fixation and storage is the same as the medium of creation. Music is visible through the notation, and there is causality between what is seen and what is heard.

Question: what are the elements notated in western music theory?

Pitch, duration, phrasing (legato, glissando, etc), dynamics (ff, fff, p), articulations (or accents like staccato)

The reading of Trevor Wishart’s second chapter casts a light on the definition and the implication of western music notation:

There are three main fundamental ideas developed in this chapter, which define and criticize classical notation:

1. Notation is “lattice oriented”: symbols are arranged on thin lines. How music can be notated through this limitation? Many elements of the experience of music are missing in the score.
2. Music theory relies on a pitch / duration paradigm and are considered as the main parameters.
3. The dichotomy between writing music and its phenomenological experience. The question is the possible gap between the composition through writing and the experience of music. Such a practice of composition can lead to formalism, and bring a total detachment between the form and its experience.

Reading notes:

- The system of notation is reductive, as it has to be made of a small number of discreet and finite elements (closed system.), and it is based on permutation.
  e.g. the notion of pitch follows that rule; “discreet fixed pitches are idealizations of acoustic reality” (p.23). The notion of octave is very closed on a certain number of notes, which repeats themselves.
- The arrangement in 2D lattice not only shapes our conception of a valid musical object, but also shapes the idea of instrument making. An instrument is created around the idea of a stable pitch but variation of pitch. (p.23)
- Notation can be seen as a “liberating invention” as it can free the composer from norms and to “explore new and unheard possibilities. (p.30)
- Boulez idea of primary and secondary qualities:
  “Pitch and duration seem to me to form the basis of a compositional dialectic, while intensity and timbre belong to secondary categories. The history of universal musical practice bears witness to this scale of decreasing importance, as is confirmed by the different stages of notational development. System of notating both pitch and rhythm always appear highly developed and coherent, while it is often difficult to find codified theories for dynamics or timbre which are mostly left to pragmatism or ethics […]”
  (Quote of Pierre Boulez taken from Chapter 1 of Wishart)
- This duality between primary and secondary musical aspects is reflected into the notions of composer and performer, between the exact notated sign and the interpretational elements. The primary element, the score becomes more important.
- Rejection of non-notated practice or composition by music scholars.
- Impact of scoring: it operates a transfer out of the time continuum. Score can be examined at any speed, either in its totality or in parts, etc.
- It raises the question of what is music: the experience of sound, or the appreciation of the score through the sound? Example of retrograde in serial music, where through a reversion of the order of group of pitches, a derived set is created. This process might be clear on the score, but not through listening.
- Is a piece which sounds aleatoric, but as been composed very rationally, aleatoric?
A. Notations: various practices

Notation cannot be reduced to western notation, as other attempts to use notations have been made, which does not depend on the pitch/duration system and explore relationships between composer, interpreter and the notation. The question of the nature and functions of notations is central. The score designate the type of the work (refer to Linda’s note on the question of types).

The score versus the transcription:
“The score and transcription operate in a symmetric relationship, with the work as its centre. Whilst scoring precedes the work, transcription follows it. The score can only be written by one person, the composer; on the other hand, the transcription can be written by any listener, even the composer himself, when it is a work fixed on a media support.
A second difference, as electro-acoustic music occupies the whole field of sound, the relevant musical criteria are multiplied considerably compared to other musical genres. In these conditions, the classic Western notation proves to be insufficient for representing the morphological criteria, for example, the dynamic profiles or the notions of spatialization.” (Evelyne Gayoux, 2005. INA-GRM website.)

A score can take various forms:

- A set of instructions (sound event of Georg Brecht, La Monte Young, Cage, etc. link with Fluxus)
- A graphical notations with defined symbol (different approaches from scientific to more personal and creative like maps, etc.)

Generally, a transcription is usually done through graphic representation.

1. Score as sound events.

Rooted in Fluxus movement, these sound events scores mainly use language as a set of rules. The score does not function only as a set of instructions, but also as a text
“Event scores are poetry, through music, getting down to facts” Georg Brecht, quoted in Michael Nyman, Experimental Music: Cage and Beyond, p. 79

<table>
<thead>
<tr>
<th>Brecht’s Five Events, 1961:</th>
</tr>
</thead>
<tbody>
<tr>
<td>eating with</td>
</tr>
<tr>
<td>between two breaths</td>
</tr>
<tr>
<td>sleep</td>
</tr>
<tr>
<td>wet hand</td>
</tr>
<tr>
<td>several words</td>
</tr>
</tbody>
</table>

(Labelle, p.64)

The action of reading enacts the score. The objective of Brecht is to stimulate imagination or perception.
Another example:

Five Piano Pieces

Any number playable successively or simultaneously, in order and combination with one another and with other pieces.
1. The piano seat is tilted on its base and brought to rest against a part of the piano.
2. Wooden blocks.
   A single wooden block is placed inside the piano. A block is placed upon the block, then the third upon the second, and so forth, singly, until at least one block falls from the column.
3. Photographing the piano situation.
4. Three dried peas or beans are dropped, one after another, onto the keyboard. Each such seed remaining on the keyboard is attached to the key or keys nearest it with a single piece of pressure-sensitive tape.
5. The piano seat is suitably arranged, and the performer seats himself.

(Labelle, p.60)

Here the chance, indeterminacy is underlined very clearly, and the piano as a sound generator is totally reconsidered.

Another Fluxus composer: La Monte Young, American composer (1935, -). His work is also linked to minimalist movement. His composition 1960 is constituted by sentence-statements like “draw a straight line and follow it”
Another composer treated score not as time based, but more as sound events, and let freedom of interpretation to the performers: Morton Feldman (1926-1987)

“Although Morton Feldman’s best-known innovation is the devising of graphical scores that permit a range of choices (of, say, pitches to be made by the performer), the present composition is not such a work. It is as fully notated as any classical quartet. In fact, it has been remarked that it could well serve as an example of how the composer himself might realize one of his graphical scores. This is precisely what Feldman actually did. He sketched out a plot of what one might call musical events (versus elapsed performance time), filling in this graph until it satisfied him. It should be understood that this was not a literal plot of, say, frequency versus time but a general guide to laying out event successions. Once this was done, Feldman then transcribed the material into a precisely notated conventional score so that performances of this piece are relatively fixed.” (The following note was originally published with the LP recording of Feldman’s piece by the Concord String Quartet (The Avant Garde String Quartet in the USA, VoxBox SVBX-5306, 1973) and later re-published in the liner notes when the recording was reissued on CD (American String Quartets 1950 - 1970, VoxBox CDX 5143, 1995))

“A key work in the development away from serialism technique is the Intersection III for Piano (1953). A graph piece, it is totally abstract in its every dimension. Feldman here successfully avoids the symbolic aspect of sound which has plagued the abstract works of his contemporaries by employing unpredictability reinforced by spontaneity — the score indicates “indeterminacy of pitch” as a direction for the performer. . . This freedom is shared by the performer to the extent that what he plays is not dictated beyond the graph “control” — the range of a given passage and its temporal area and division are indicated, but the actual notes heard must come from the performer’s response to the musical situation.”

(Frank O’Hara afterwords in Feldman, p.213)

Feldman questions the relation between the structure of the work and the image, and also the idea of indeterminacy, and use the score as a way to control the area of unpredictability.

Sound mapping in the city: scored listening experience: a guided itinerary pre-defined can take the form of a score.
2. **Graphical notations**

There is a possible bridge between visual art and the idea of score and music. Morton Feldman, for example was very much connected to the abstract expressionist movement. But there is a long tradition of a corresponding system between music, color and a possible representation of both common perceptual elements (i.e. Paul Klee, Arnold Schoenberg and his Klangfarbenmelodie)

- Rolf Julius, Cello piece, Resonnanzen 1 Stadtgalerie, Saarbrücken 2002.
  A collaboration with a cellist for a musical interpretation of abstract pictures.

Graphical notations open up possibilities to compose with informal sounds. They are used to describe a situation, where composers can have extra level of control in particular domains, and give extra level of freedom to the performers. In that way, they set new relationship between composer and performers.

Notations can also be created as a *trace of the process* between the sonic material used and their use by the performers (i.e. Stockhausen, Kurzwellen, 1968. A work for 6 players with a duration of 50-60 minutes.)

**a. Sketch or drawing as a composing tool.**

- Computer based
- Drawing of structure, texture, sound gesture, etc.
- Images as score (e.g. Ivo Malhec for the film “Structure” (1961) by Piotr Kamler. GRM web.)

Example of graph: Morton Feldman / *The King of Denmark*
  John Cage / *Fontana Mix*

http://www.ubu.com/aspen/aspen5and6/audio5C.html

**b. Graphical transcription.**

It is personal approach, and does not rely on fixed symbols. It is thus not neutral, and it is not the work, neither the visual representation of the work, but a possible representation. It takes most of the time the form of an analytical interpretation.
Stephane Roy suggests, “a code correspond to a work, a specific way to arrange syntactic functions. But this code is reflective, as it shows perceptive conduct; to analyze is to give a meaning, and not to give the meaning.” (Roy, p.68)

Computer generated (ex: *Acousmographe or Audiosculpt* softwares based on Short Term Fourier Transform analysis [a time – frequency – intensity physical analysis of a sound sample].)


[Follow the sound > highlight the sounds > Tremblement de terre très doux (Francois Bayle)]

(acousmographe + Corel Draw: symbols can vary in size, color, shape and position)

What are the implications of such a practice? In the acousmatic genre, any visuals representation should be banned. Transcription brings a paradoxical situation by creating a visual representation for non-visual music.

There are possible gains from sonographic representation:
- exploration of microstructure of sounds
- display what could be lost at a perceptual level (i.e. some sound frequencies like between 15Khz-20 KHz cannot be heard by all)
- possibility to develop inner hearing.
(Cf. V. Tiffon)

Class exercise:

Listening score by Stephane Roy of *Points de Fuite*, Francis Dhomont, Cycle de l’errance. Look at the transcription and write a description of the sounds (of all or a short passage), then listen to the piece.


GRM web // acousmaline

[Follow the sound > annotate the signal > De Natura sonorum – dynamic de la resonance (B. Parmegiani)] (“percussive score”)

2. *Codes as a notation?*

Can we consider programming as scoring? The program flow can be taken as the organization of events in time.

**Conclusion:**
- Different types of notations and usages (scores, transcription)
- Notation is a part of new music practices, as a way to open up possibilities and break the boundaries of western classical music.
- It encompasses different practices: difference between score and transcription, difference of forms (graphical, textual, etc)
- It offers new relationships between composer and performers.
- It questions of the relation between poietic aspect (productive, formative level) and aesthetic (level of reception, perception).
References:


Website:

Pictures of music: http://www.blockmuseum.northwestern.edu/picturesofmusic/
Ubuweb sound: http://www.ubu.com/sound/