Documentation of

(At least) Three Perspectives on Depth and Contour

Preface

Leona Jones (University of Falmouth, Great Britain) is studying Performance Writing (MA), a cross-disciplinary approach to writing which centres on word as event/performance where language is a major, but never the only, component of text. Building on from previous careers utilising spoken word and academic research in English Literature and scriptwriting, she is developing her practice across media using text, sound, spatiality and visual image. Actively seeking to highlight physicality, location and context - word/sound/in

- Leona's practice embraces continual questioning of definitions, placing physicality as central in the interrelationships between writer, word and world. Her cognitive interest during this intensive programme was focused on the question: How and why is audible literature possible in public?

Robert Kalman (University of Siegen, Germany) is currently working on his PhD-thesis concerning "*A Philosophical Theory of the Aesthetics of the Schnittstelle*" ("Schnittstelle" is a German expression for a place, where, according to Robert, physical interfaces are functionally linked to semantic processes). Since his work claims to be grounded on epistemological reasoning and current developments in the philosophy of language, the main interests he followed during the Erasmus Program concerned the descriptional and explanatory values of concepts and arguments in current theories of literature. So his cognitive interest can be described as: *A philosophy of literature in the context of a philosophy of arts.*

Before Leona and Robert formed the project group they already had lively conversations on the possibilities of audible literature compared to the potential of written or printed instances. There was also a great deal of talk about sound-engineering, too, which they considered to be a necessary discipline to achieve convincing results in "writing" and "wreading" sonic literature. But the most intriguing discourse emerged on the concepts of "depth" and "contour". For they both were deeply inspired/affected by an essay Yves Abrioux brought up in his lecture where these two concepts played a key role in argumentation: "*Contours of Constructive Hypertexts*" by Mark Bernstein, Michael Joyce and David Levine (1992). From this point it seemed quite obvious to them that their combined efforts had to deal with the concepts of "depth" and "contour" and that a combination of their artistic and scientific interests had to leave the realm of the "traditional" mouse-keyboard-screen-trinity. Consequently the idea of a hypertextual sound-installation on "depth and contour" became inevitable.

Main Ideas

In order to present an overview of the bandwidth of their considerations and reasoning Leona and Robert put the most important key concepts into alphabetic order. At the same time the following list represents the main requirements for the piece of art the project group planned to accomplish, thus the working process as well as the result of the group was intended to be/get:

- ARTISTIC. Considering the history of arts this requirement seems to be the hardest to meet. But since the acceptance of a work to be artistic still depends on the "mere" cultural conventions of the social context it appears in, at least from the perspective of a scientifically motivated cognitive interest the attribute "artistic" has to be considered as an arbitrary and social act of attribution. So the scientific solution to this requirement is probably the easiest and therefore the most elegant way to deal with arts in general - claim a work to be artistic and there will be no scientific reason to deny the artistic status of that piece, for the reasons to consider a work not to have artistic value are as arbitrary as the reasons to attribute artistic status to it.

- AUDIBLE. Auditive text production, especially in public spaces, has the potential to transcend the linear wreadings of most of the screenbased literary phenomena.

Leona explains: *Maybe this is a point to bring in where linearity comes from, ie the historical expectation in western civilizations that reading starts page top left and ends page bottom right. We both agree, as you say later in the piece, that linearity as a concept in w/reading is not useful - but it's still grips us all. Finding ways of counteracting this is a huge challenge, and one that's starting to be taken. So why is this important? Because the way we read conditions the way we think? But are we now beginning to explore fragmentary ways of writing because we're losing the ability to concentrate for more than a few moments, or because of the speed of life needing 'read-bites', or because it's actually a more productive method of reading, or.... Again, another massive discussion point. But very valid to raise, I think. Digital literature is very well placed to take on the challenge, and auditive text production can have a transportability which adds another dimension to the placing of wordsounds.*

For me it's not about audio having a greater potential to offer an alternative to the linear – that could be done anywhere linear currently predominates, (but we're into another discussion as to why it's not happening more widely!). I think it's more about the great potential to offer an alternative, full stop. It's still hanging around on the edge of the field waiting to be asked to play – though it's time is coming! Audio works are newer, more novel, to us because we're so used to reading sentences in books or on screen, or being talked at, though the interactive oral tradition is actually centuries older than mass book production and general literacy. Our understanding of how sound works has increased dramatically, opening up other new areas too, as has recording technology, and this is

also opening up something that has always been there. Voice, ear (and all the other senses), and imagination co-create, and being part of a group of individuals also responding brings about the 'collective unconscious'/feeling of belonging response, which of course happens in many other settings, eg music concerts across genre. It brings together, opens possibilities rather than tying down certainties. Through wordsounds we're linked to consciousness, our own as well as that of others.

- CONTOURED. Leona and Robert agreed to disagree in the matter of this attribute. Although both showed interest in the inspirational power of it, they struggled with its descriptional and explanatory value when dealing with hypertexts. Some of their scientific and artistic arguments had been made audible for the resulting piece itself.

- COOPERATIVE. At least the history of art teaches us to be self-reflective. Thus Leona's and Robert's cooperation had to deal with itself, which constituted their claim that the resulting installation had to be multi-user-compatible in order to encourage the audience to cooperate not only with the installed text producing machines but with other persons, too.

- DEEP. In contrast to the concept of "contour", the use of "depth" with an intended metaphorical meaning is more common in everyday life and therefore enjoys far more cultural acceptance. That is why, e.g. meaning itself can be considered "deep" (and at least to Robert, why (even metaphorical) contours in any text seem always odd). But in this case Leona and Robert agreed on both values: on the scientific-explanatory value of depth as well as on the artistic and inspirational potential of the concept.

- HYPERTEXTUAL SOCRATIC ESSAIS. Imagine the literary methods of Socrates and Michel de Montaigne combined with the immense range of (linear as well as nonlinear) possibilities of current hypertexts.

Robert comments: *We had our conversations. We took our time for self-reflections. And in the end we came up with several ideas put together in an interactive text- and sound-installation, where the prearranged texts would be the resource for the audience to create new conversations and/or self-reflections which can be fed back to the installation, and so on.*

- LINEAR. (see Leona's explanation of "AUDIBLE")

- LITERATURE. For Leona and Robert "literature" had to deal with text in a wide sense of meaning, since their personal interests in the study and the production of literature were not reduced to a tradition due to canonical demarcations. Leona aimed at artistic text production in the public sphere whereas Robert focused on the semi-public and scientific production in the field of philosophy.

- NONLINEAR. It seems almost impossible to describe, let alone to explain, the simultaneous text production in public spaces via a story line written or printed on

surfaces. Although a parallel transcription would indicate texts occurring at the same time the user will not succeed in reading the visual representations of these parallel texts at the same time.

- SCIENTIFIC. Which means NOT the mere instrumentalisation of other people's theories but more or less the serious work of hard sciences itself as an integral part of the piece.

Initial ideas to *(At least) Three Perspectives on Depth and Contour*

The project group planned a hypertextual environment in which at least three "levels" of texts could be audibly de- and/or reconstructed simultaneously by interacting physically with the installation in several ways.

The **(at least) three levels of texts** would be:

a. A **primary text**, in this case the above mentioned essay written by Bernstein/Joyce/Levine.
b. A **secondary text**, a scientifically theoretical reaction to a).
c. A **tertiary text**, an artistic reaction to a).
d. and so on...

Each level of text would have to be recorded to computable audio files and then to be cut up in several more or less meaningful pieces of audio.
On the one hand the installation would then have to provide an obvious
possibility of **reconstructing** the original order and meaning of the three prearranged textual levels. At this point the use of a matrix came to mind. Providing this logical graphic instrument the piece would be able to give a reasonable overview of all primary textual samples as well as of all corresponding textual reactions (b), c) and d)):

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      parts of textual level a: a1.a2.a3.a4.a5.a6...an.
parts of textual level b: b1.b2.b3.b4.b5.b6...bn.
parts of textual level c: c1.c2.c3.c4.c5.c6...cn.
parts of textual level d: d1.d2.d3.d4.d5.d6...dn.
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.
.
parts of textual level m: m1.m2.m3.m4.m5.m6...mn.
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On the other hand the result of the project was intended to encourage the audience to alter the predetermined order of the textual parts horizontally as well as vertically (i.e. to **deconstruct** and **reorganise** the textual contents) in order to create new linear "story lines" of the offered textual elements (e.g. "a3.a6.a2.a1...an." or "d1.a1.c1.an....b1." or "d6.a1.c2.b5.b.1....dn." ...)

Initial designs of **physical levels of hypertextual interaction**

- An unavoidable and audible triggering device on the floor of the entrance door to the installation: e.g. several plates of metal layered on an innerspring mattress, which has to be crossed by the audience when entering the installation. On the one hand this object makes interesting sounds itself. On the other hand an electro magnetic pick-up (e.g. the

pick-up of an electric guitar or bass does the trick, or Leona's special pick-up) which is stuck magnetically underneath one of the metal plates delivers:

a) an analog audio-input directly to a mixing-console for PA purposes (Robert successfully implemented this possibility in several installations at the *Universität der Künste* in Berlin) and/or

b) a digital audio-input delivered by a connected AD-converter of a computer, where the signal could be used for triggering e.g. audible or printable text samples.

- A dining or writing table prepared with several contact microphones. On the top of the table the audience would see the before mentioned graphic of a matrix painted on the surface. A little machine or somebody of the project group would then have to knock on one or more cells of the matrix in order to present to the audience the interactive possiblities for triggering audible excerpts of the textual levels.

- some thoughtfully positioned microphones, which are able to encourage the audience to add audible texts or reactions of their own to the installation (e.g. a microphone set up on a speaker's desk). Converted to digital data, these signals could e.g. be cut up and fed back to the audience via a PA-system automatically.

Observations

The use of mouse, screen and keyboard in themselves function in a linear way.

- Leona: *It's a valid point to say linearity is a function of screen-based work because of the technology used. As I said earlier linearity is a massive idea in itself, and very solidly rooted in literary culture. Pure audio has to use different navigation methods if it wants to produce meaning – repetition, tone of voice, image, dynamic range, etc – but they're not so well documented. Everything is structured in some way. Something we never had chance to discuss is how to navigate through our audio texts – one of the lecturers highlighted that making continual random choices is not a way to make meaning, if meaning is what is wanted. Even John Cage said that by using randomness he wasn't abdicating responsibility – the questions he formulated before using I Ching took a great deal of thought and preparation! Though of course randomness is a way of generating novelty and/or suspense. Or nonsense – which can lead to sense through attempts to make sense of nonsense, or can be pleasurable in itself. 'Reasoning itself has to provide a linear readability' because... well, see above :)*

Although Leona and Robert agreed that nowadays neither descriptions nor explanations of neither writing nor reading should be reduced to "linear" processes, the usual and individual ways of re- and deconstructing the prepared textual levels obviously tend to lead to the very same and usual "linear" results you experience when you read a book or a usual hypertext for your own. For the resulting individual "wreading" could then be transcripted and even published in book form.

However audible texts (e.g. in conversations or sung by a choir) and cooperative interaction in general (e.g. when playing music together) bear the great opportunity to cooperate simultaneously. But who is the author? Is there some kind of a co-authorship?
E.g. two or more people can talk at the same time. In most cases this would be considered as a disturbing social activity. But consider e.g. the literary situations on some European markets, where several market criers put several texts into the sonic environment of the market. Nobody in the "audience" minds the Babylonian confusion but tries to find the best offer by hearing all texts at the same time and focussing on (or listening to) the most interesting ones. The rest is filtered out of consciousness and thinking.
Although this literary phenomenon isn't that unusual in everyday life and arts (e.g. Robert Altman stressed this point in *M.A.S.H.* (1970) several times), concurrent generation of texts sometimes turns out to be some sort of a blind spot in theoretical reasoning on literature.

- Robert annotates: *One possible reason for this could be the fact that reasoning itself still has to provide a "linear" readability, which allows the text to be written or printed on paper. And at least from a scientific point of view there is still no need for a physical experience of more than one theoretical text coevally. Even if the linear result has been put together from pieces of different text levels (what e.g. seems to be the case with the primary source, since three persons are held to be responsible for its text: Bernstein/Joyce/Levine), compared to arts scientific results have to be presented in a linear textform for good reasons. And even if a scientific book contains nonlinear graphical elements, the text has to stuck to a "storyline". This is not obligatory for "textual jam-sessions" in arts (e.g. in M.A.S.H. , freestyle rap, most of the parliaments, modern theatre, etc.).*

Leona and Robert wished to provide the combination of two approaches. On the one hand the installation should be accessible to **linear ways of scientific and philosophical experimentation** enabling the audience to re- and co-create scientific results of the familiar linear form. On the other hand it should encourage the **nonlinear and concurrent artistic approaches** of the audience in order to enable cooperative textgeneration in extended, maybe nonsensical ways.

Technical Solutions

1. site-specific multi-sensory installation

The initial design of the installation required several sensorical inputs, which could be fed into AD-converters of a computer in a simultaneous way. The available input devices were:

audio
2 x contact microphones
2 x condenser microphones (small diaphragm) in X/Y-setting
1 x hydrophone
1 x large diaphragm condenser microphone
n x built-in microphones in portable computers (cell-phones, laptops, IPad)
2 x condenser microphones (small diaphragm) in simple stereo-setting for IPad

1 x clip-on microphone (offered to the group by Philippe Bootz)
1 x electro-magnetic pick-up

video
n x built-in-cameras (cell-phones, laptops, IPad)
1 x digital photo-camera

For the sake of the available time and personal interests Leona and Robert agreed to leave all video-inputs out of further conception. And due to the lack of a multi-channel audio-computer-interface, which would have been easily available at the universities of Falmouth or Siegen, the whole idea of a multi-sensorical audio-environment would have been limited to the two input-channels of the only available audio-interface. Since at least 8 audio-input-channels would have been necessary for the installation to be interesting, Leona and Robert decided to skip the microphone-based solution, too, although they already did some experiments with the combination of two contact microphones, *Samplitude*-sequencer-software, *Tobybear Peakfreak* VST-plugin (translates audio-peaks into midi-notes, the tobybear-webpage is currently down!) and *CWI-Technology TX16Wx*-sampler VST-plugin (http://www.kvraudio.com/product/tx16wx-software-sampler-by-cwi-technology).

2. *alternative multi-sensory solutions*

Unaffordable solutions

Rui Torres reminded the project group of the fascinating **reactable**, an instrument, which in fact would have been, besides the idea of an art-installation, the most intriguing technical solution. For instead of the Cartesian coordinate system of the initially intended matrix of textual contents, the *reactable* would provide several polar coordinate systems in

order to correlate computable contents, processes and parameters.
multi-user capability of the reactable   *polar coordinate system of the reactable*

Although in this context the multiuser and multitouch capabilities of *Microsofts Surface* has also to be mentioned, several custom-made solutions based on the open source technology of the *reactable* are far more interesting. Especially *subcycle* of *Christian Bannister* (http://subcycle.org/) has to be considered, since it is probably one of the most complex electronic audio-instruments for controlling audio-synthesis as well as audio-

sample based material currently available and probably far beyond price. This instrument would surely extend the possibilties of the textual jam-session idea onto higher levels of experimentation.

Christian Bannister's subcycle

Another, but off-the-shelf solution would have been, as Robert pointed out in the presentation of the project, a combination of the *Ableton Live* sequencer software and e.g. the *Novation Launchpad.*

Ableton Live   *Novation Launchpad*

A solution based on the *arduino*-platform (http://www.arduino.cc/), which Rui Torres suggested to another project, probably would have been the cheapest and most elegant

way to realise the initial idea of a multi-sensory environment. Unfortunately this technology was unavailable during the program.

3. *Technical solution presented at the end of the Erasmus-program*

Inspired by the combination of *Live* and *Launchpad*, Robert looked for a similar application for the available IPad, which would provide a so called cell-sequencer-matrix (most popular in *AKAI*'s *MPC*-Instruments) in order to manage the logical overwiev over textual contents with their semantic correlations to each other and the required capability of triggering several audio-samples at the same time.
Native Instruments iMaschine

Cooperative and Nonlinear Motivations, Ideas and Paths

Leona's motivations aimed at the quality and the possible aesthetic roles of spoken texts in the sonic enviroment of public spaces in Madrid. Regarding texts in this complex and arbitrary soundscape of the city, the concepts of "depth" and "contour" seemed to her to be useful when it comes to thinking, speaking and writing about cooperative and non-linear text production in public spaces. Inspired by the metaphorical and poetic possibilities of *depth* and *contour* Leona collected and generated sound and original spoken word text samples, grounded on the physical situation and theoretical inputs of the course.

In Madrid, Robert's interest in the interrelation between physical interfaces and semantic processes were more of a theoretical nature. So he first analysed the primary text "*Contours of Construc*tive Hypertexts" in order to understand the line of argument. Then he chose 24 short parts of the text which altogether and in the original order seemed to be capable of representing the argumentation of Bernstein, Joyce and Levine. Rui Torres was asked to choose four of these 24 passages which he then read out loud in front of Leona's recording equipment. While Rui was recording Robert prepared some theoretical reactions on the primary text, which he then recorded with Leona.

In the next step Leona and Robert edited and arranged the available audio material, so that the matrix of the iMaschine would provide the audience with a wide range of metaphoric (semantic) and actual (sonic) "depth":

- The primary (scientific) text in the first line delivers the sound quality of Rui's voice and the subtile "depth" of the small seminar room where Leona recorded Rui's spoken words. [- On this level of text no more sound editing was attempted (with the exception of simple cutting procedures), for the relative sonic "depth" of the primary literary source was intended to be as "dry" as possible without acting too artificial to the user/audience. Within the sonic experience on the iMaschine the sound of the primary text level adds only "little"/short reverberation to the overall sonic experience of the configuration, since it was deliberately recorded in a small seminar room.]
- The secondary (theoretical) text in the second line uses the stereophonic sound qualities of the recordings of Robert's voice and the sonic "depth" of Madrid's soundscape on the UCM campus in front of a building around noon. [- The sound of Robert's reactions on the primary text was intended to sound different to Rui's recordings. So the offsets in "depth" and stereophonic placement were achieved by outdoor recording without adding any sound editing to the file, except the obligatory cutting procedures.]
- The tertiary (artistic) text in the third line deploys all available hardware and software possibilities to employ site specifically recorded as well as artificially added reverb ("depth") and stereo behaviour ("panorama") to the overall sound experience of the piece.
- In (sonic) contrast to Rui's and Robert's (sonic) appearances this tertiary level of text-sound combination seems to act as a possible sonic and semantic frame to the piece, since it was meant to use the whole range of sonic depth and broadness the technical configuration of the installation would probably be capable to present [up to artificially added and very large "cave" reverberation as well as automated phase and panorama modulations of the sound]. Furthermore the whole range of semantic depth (up to theoretical selfreflectiveness as well as metaphoric and fourth-person narratives) has been explored in order to meet the high standards the audience is possibly able to produce.

Epilogue

> 'The meaning of an episode was not inside like a kernel but outside,
>
> enveloping the tale.'
>
> (Jusuf Crocal Usra f Barlow wer H. Darseslaw. ")

Leona Jones:

So, 'Contour' - a light brown line on the British OS maps denoting links with places the same height above sea-level in the same area. This cartographic formalisation led somewhere very unexpected - metaphoric representations of boundaries between, above and below. Texts suddenly opened up, not Tolkien-like because of landscape written, but because of ideas above and below, threading their ways in and out and through. A wreading of a wordinary that took it elsewhere. For me this is what it's all about, an aliveness coming from and feeding into.

The 3D implications of 'depth' followed naturally. Ideas with life can live on many planes at the same time. But contours are also places of difference, difficulty, danger, not to be traversed lightly and without the right preparation. Choices have to be made, paths found and followed. During our discussions plenty of pathways were started along, only to be abandoned as one of us hauled the other away.

Eventually, we found a common path. We followed it, accepting each other's understanding of contour, and looking for the same route. Patterns, recurrences began to appear. These are what we worked with, using experiences and interpretations we carried from journeys already made.

The meaning of the episode we found was not inside like a kernel, but outside, enveloping the tale, opening it up. It's what we experienced as digital literature. It's a tale began with difference, it's a tale that should continue in the telling, all tellings...

Robert Kalman:

There still remains a bunch of ...

- ARTS
- AUDIBILITY
- CONTOURS
- COOPERATION
- DEPTH
- HYPERTEXTUAL SOCRATIC ESSAIS
- LINEARITIES
- LITERATURE
- NON-LINEARITIES
- (and last but not least) SCIENCE

... to be put into this kind of envelope.

Pictures:

Reactable multi-user ability:
http://lifeworkshop.files.wordpress.com/2011/12/reactable-prototype.jpg

Polar coordinate system of the reactable:
http://archiv.ok-centrum.at/presse/cyberarts_08/bilder/reactable1032.jpg

Subcycle project of Christian Bannister:
http://subcycle.org/

Ableton Live:
http://www.mashupciti.com/wp-content/uploads/2011/04/Ableton_Live_3_Session.gif

Novation Launchpad:
http://www.ableton.com/pages/resources/2009/novation_launchpad/launchpad-ableton-main-image.png

Native Instruments iMaschine:
http://cdn.mos.musicradar.com/images/Product%20News/Tech/Jul12/imaschine-ableton-live-660-80.jpg