Alternative Forms of Theory: Drawing as Understanding

Migratory Practices: Exchanges Between Anthropology, Art, Craft & Design

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This paper comes from both my PhD research as well as my current position. My PhD research was with the Creativity and Practice Research Group, a collaboration between anthropology at Aberdeen and the school of fine art in Dundee. My research was on inscriptive practices, asking the question if such practices as drawing, notation and diagrams might be forms of understanding, if they might be thinking tools rather than simply representations.

The first part of this paper shall address this question with reference to a piece exhibited in Aberdeen as part of the Creativity & Practice group's exhibition: Field-notes and Sketchbooks. The work concerns the depiction of the rocking movement of a Japanese Daruma doll, which characteristically rocks backwards and forwards until reasserting its balance. These descriptions are alternative understandings of this same event - each taking a particular position regarding the question of the movement itself.

The other aspect of this paper is my current research with architecture and music in Edinburgh. This research is on the voice and its relation to space. As part of the *Inflecting Space* AHRC speculative research project, I am working with environmental recordings. Visualisation and graphing is an essential part of this process, despite working with material that is so fundamentally sonic.

What, then, is it about the inscriptive practice that is so important as a form of understanding? Would it be more appropriate to find sonic means to describe sounds, for example? I shall demonstrate some examples of sonification, and refer to discussions with archivists at the British Library Sound Archive that highlight the needs for categorising and understanding sounds visually. At root, what this allows for, is the simultaneous assessment of a large number items. Given that sounds are inherently temporal, spatialising these in some way offers a cross-comparison and a totality that is useful in certain circumstances.

Part One: Duration and Notation

Bergson's challenge to consider inscription as a process.

Bergson's challenge to consider inscription as a process. Bergson, of course, did not express such an emphasis or focus in his work, being as it is a more general investigation into philosophy and metaphysics. I shall, however, be giving a reading of Bergson which explores some of the implications of his work with regard to my study of inscriptive practices.

It is perhaps wise to place this in context, and to describe my methodology. I am just completing my PhD research with the AHRB's 'Creativity and Practice' research group, which is a collaboration between Duncan of Jordanstone school of fine art in Dundee and the department of anthropology at Aberdeen, working closely with Tim Ingold, Murdo MacDonald and Wendy Gunn. My background is in architecture, where I pursued an earlier research career exploring the potential of cinematic concepts such as montage and documentary to architectural theory and practice. This developed into my PhD research, entitled 'Towards a Theory of Notation as a Thinking Tool.'

In this work, I have developed a methodology which explores inscriptive practices such as notation by engaging fully with such practices. This has lead to projects including the Seven

Samurai notation and drawing, a notation of the Sumo, a series of drawings exploring my experiences of getting lost in a Tokyo subway station, a project putting a Daruma doll through its paces, and finally a series of paintings about placemaking and diagrams.

Each of these projects, as outlined in the longer version of this paper both respond to and generated theoretical ideas for the conventionally academic text of the thesis. Indeed, I regard such inscriptions both as fieldwork and as a valid means of pursuing theory - as wholly equivalent to writing. These projects form a conversation with the rigours of academic writing and verbal presentation expected of PhD research.

figure 1: the Daruma doll

Our starting point with Bergson, then, is to regard these practices - broadly defined as any practice in which a mark is made upon or into a surface with the intention of recording or communicating. This might be a communication as direct as 'this is the mark left by my gesture' or as complex as a short essay on the temporal nature of inscription.

Bergson encourages us to consider such practices as processes - things that take time. This runs counter to the material culture group of disciplines which tends to look at and analyse 'finished' objects.[1] Whilst such investigations might theoretically tangle with the notion that nothing is ever really finished - the issue is often dealt with inadequately, or left unresolved. Attempts to consider such material objects temporally will render them as points of development, frozen like an Eadweard Muybridge photograph - an inadequate representation, as demonstrated by the Daruma series.[2]

The implications of a temporal consideration do not devalue the pursuit of spatially and geometrically lead investigations - but move beyond them to a deeper understanding of the forces at work in a practice, process or phenomenon. A key source here is Bergson's 'The Creative Mind.' It is here that we see Bergson pursue his difference in kind between the activities of the scientific or mathematical problem solver and the artist or creative practitioner.[3] The speculative problems of the scientist have a completely different nature - that is to say a difference in kind- from the creative problem.

This notion of differences in kind is particularly important - that the only true differences are differences in kind is one of the cornerstones of Bergson's philosophy. All other differences are mere differences in degree between one extreme and another. Related to my own work,

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[1] 'There do not exist *things* made, but only things in the making, not states that remain fixed, but only *states* in process of change. Rest is never anything but apparent, or rather, relative. The consciousness we have of our own person in its continual flowing, introduces us to the interior of a reality on whose model we must imagine the others. *All reality is, therefore, tendency, if we agree to call tendency a nascent change of direction*.' Bersgon, H. *The Creative Mind*, p188.

[2] 'Let us reflect for a moment on this "present" which alone is considered to have existence. What precisely is the present? If it is a mathematical instant, it could be to time what the mathematical point is in the line - it is clear that such an instant is a pure abstraction, as aspect of the mind; it cannot have real existence. You could never create time out of such instants any more than you could make a line out of mathematical points. Even if it does exist, how could there be an instant anterior to it? The two instant could not be separated y an interval of time since, by hypothesis, you reduce time to a juxtaposition of instants.' Bergson, H. *The Creative Mind,* p151.

[3] 'But the truth is that in philosophy and even elsewhere it is a question of *finding* the problem and consequently of *positing* it, even more than of solving it. For a speculative problem is solved as soon as it is properly stated. By this I mean that its solution exists then, although it may remain hidden and, so to speak covered up: the only thing left to do is to *un*cover it.' Bergson, H. *The Creative Mind*. p51.

this channeled my thinking away from a continuum or spectrum of inscriptive practices, say from the most language-like on one side to the most abstract and directly gestural on the other - but rather to consider notation, diagram, mapping, gesture and representation as particular qualities with their own nature, and which might co-exist or nest within one another at different points in a process and with a variety of effects on the understanding such practices bring.

> 'I said to myself, time is something. Therefore it acts. What can it be doing? Plain common sense answered: time is what hinders everything from being given at once. It retards or rather it is retardation. It must therefore be elaboration. Would it not then be a vehicle of creation and of choice? Would not the existence of time prove that there is indetermination in things? Would not time be that indetermination itself?' Bergson, *The Creative Mind* p93.

It is worth taking a short aside into Laban notation, as it forms a common thread in a number of my projects on account of its rather unique and useful qualities. Rudolf Laban, an associate of the Zurich Dada movement and recognised as one of the pioneers of modern dance, was not the first or last person to attempt the construction of a system of movement notation for dance. Laban's system responds to his complex theory of movement and provides the performer with a notation centred upon their own body. This performer-centric notation provides the dancer with the instructions to construct a movement, rather than simply showing them what shape the body should make to the audience. This important distinction allows Laban to be more flexible, and to accommodate whole ranges of movement from the fundamental support movements required to stand upright, moving outwards from the staff to progressively more postural, gestural and detailed movements. The system can also leave room for individual interpretation, where the performer has the room outside of prescribed movements, so that they might express themselves more spontaneously and improvise on the spot.

This balance makes Laban a powerful form of movement notation - and possibly overpowering, as some of the literature from choreographers and notators might suggest.[4]

One exploration of the qualities of Laban can be found my series entitled 'Gestural Artefacts: Notations of a Daruma Doll' for the 'Fieldnotes and Sketchbooks' exhibition. This exhibition brought artists, architects and anthropologists together to present their explorations of descriptive practices. The Daruma doll, a kitsch and ritual item found in Japan contains within it a number of gestures, such as painting in the eyes and rocking (this is so that Daruma, a representation of a revered Buddhist priest who was so enlightened that he lived for a long time in a cave, so long that his eyesight failed and his limbs withered - he gives aid for a difficult task beginning when you paint in one of his eyes, the other eye being painted in to show your gratitude on completion of the task). The gestures such as grinding the ink and rocking the doll, which is weighted at the bottom, righting itself when laid on its back, were notated in a variety of ways.

First, a video was shot, recording the movement. From this, a series of frame captures could be made, giving a sort of storyboard of each movement. We begin to see some inadequacies in this approach. In some cases, the difference between frames is so small that a movement is difficult to discern - that we read the pictures as being so close at to be identical. In other cases, the converse is also true. That too large a gap exists between some frames, and that it requires too much of the spectator to bridge that gap. There is a reason why cinema is shot around 24 frames per second, after all.

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[4] Guest, A Hutchinson-. 1989. *Choreo-Graphics: A Comparison of Dance Notation Systems From the Fifteenth Century to the Present*. Amsterdam: Gordon and Breach.

Kipling Brown, A with M Parker. 1984. *Dance Notation for Beginners: Labanotation, Benesh Movement Notation*. London: Dance Books.

Laban, R. 1966. *The language of Movement: A Guidebook to Choreutics*. Boston: Plays Inc.

Louppe, L (Ed). 1994. *Traces of Dance.* Paris: Editions Dis Voir.

The majority of the frames fall into a zone where we can apprehend the movement, but enough of the important movement is at the extremes, rendering this form of representation to be of little use as a notation or instruction on how to recreate this movement elsewhere.

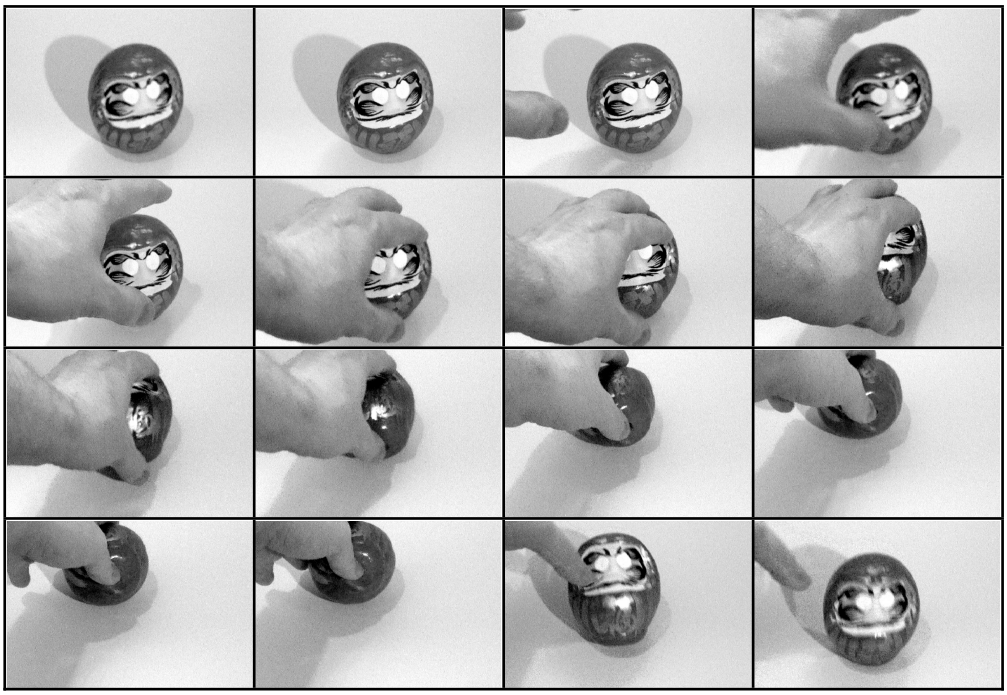

figure 2: frame captures

Bergson gives us some interesting food for thought on this matter:

> 'Though all the photographs of a city taken from all points of view indefinitely complete one another, they will never equal in value that dimensional object, the city along whose streets one walks. All the translations of a poem in all possible languages may add nuance to nuance, and, by a kind of mutual retouching, by correcting one another, may give an increasingly faithful picture of the poem they translate, yet they will never give the inner meaning of the original.' Bergson, *The Creative Mind*, pp160-161.

With the failure of the frame capture in mind - and the success with which the images from that experiment can be recomposed back into video footage or even low-tech flip-books, I set about a Laban notation of the movement. This inscription encouraged an understanding of the

movement - rather than simply a recording of it. This understanding made the next part of the process possible: translation.

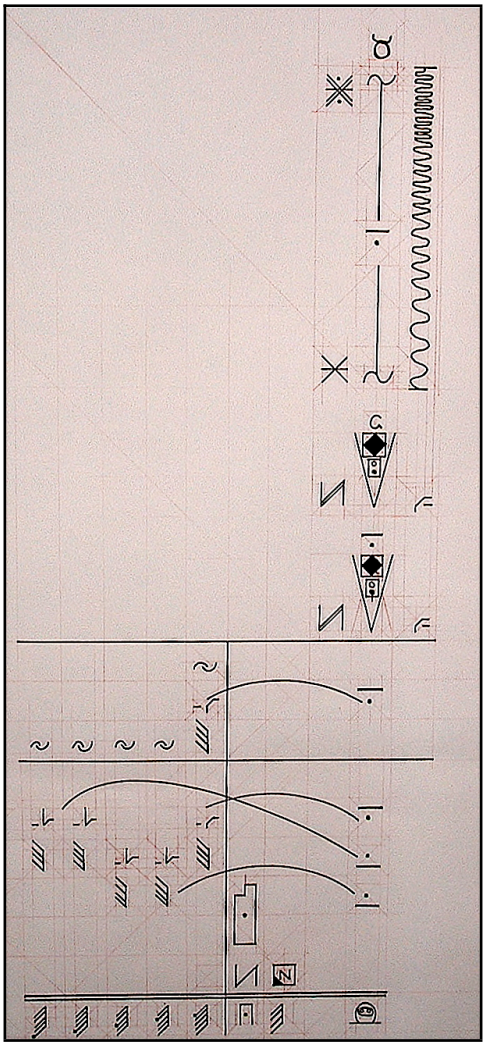

figure 3: Laban notation of Daruma movement

In a similar process to that employed by an earlier series of drawings of my experiences in Tokyo, certain phrases and symbols were found to recur in the Laban notation. By translating these - by means of abstracting them from their context, I arrived as a set of building blocks which mirrored the components of the movements made by the doll. As with the flowchart earlier, the Laban imposes its system of understanding onto the next part of the process.

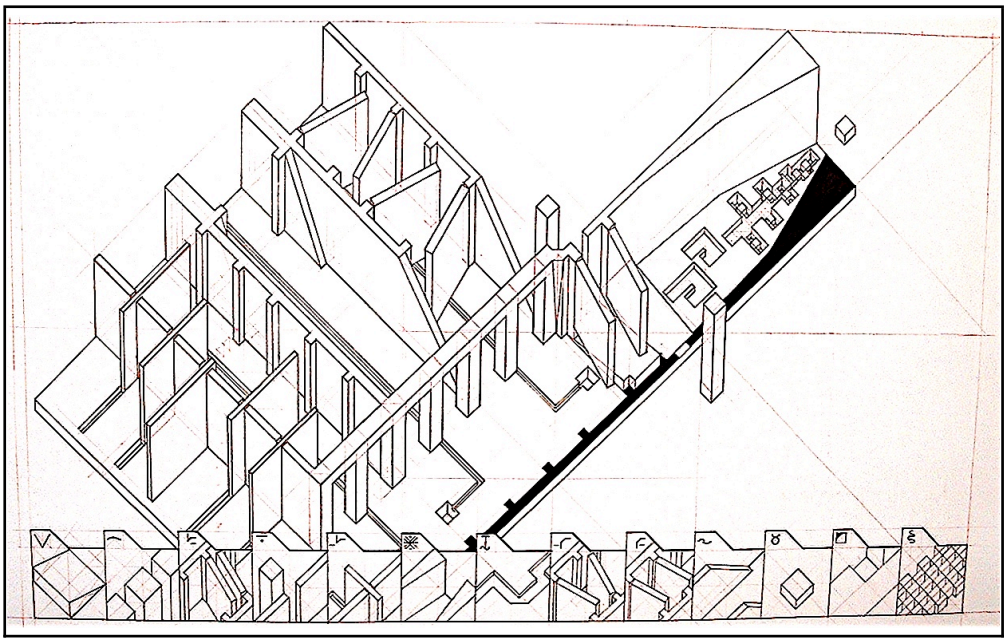

figure 4: the architectural translation

In this project, the aim was to reconstruct the Laban notation into architectural space - an architectural space which recorded or instructed the relevant set of movements.

It is interesting to note, however, that the last inscription of the Daruma was perhaps the most satisfying. This last response was again to the rocking movement, responding to the twelve-second video clip, I made a mark using Chinese ink and a broad, coarse brush. This line - an immediate, that is to say without mediation, gesture which was made according to a rigorous timing of watching and responding to the video clip. Audiences appeared to respond to this mark in the exhibition because the line is most clearly understood as the trace of an action - as a gesture which can be reconstructed based upon their own experience of making marks. This is mediated too far in the case of the Laban and architectural drawings - which are seen as puzzles to be solved. A sympathy and understanding of this simple line of black ink which took twelve seconds to inscribe tells us much about our process of interpretation.

figure 5: Calligraphic ink drawing.

A potentially flippant exchange with the post-doctoral researcher responsible for curating the Aberdeen exhibition serves to render visible another of Bergson's ideas on differences. I suggested, as a joke, that we might present the Daruma doll as the cumulative result of the architectural drawings, followed by the drawing being translated into Laban notation, video frame-captures and calligraphic ink drawing. That the doll might be the result of this process rather than the other way around. The absurdity of this proposition serves to show how ingrained the notion of speculative problems as defined by Bergson are - that it would appear logical if absurd to think of any process as an equation where factors can be reversed or moved around in order to cancel the sum to zero. Bergson maintains that differences in direction are not mere differences in degree (and as such false problems not really worth of consideration - fantastically dismissive, but a useful tool to analyse *why* a problem is false) - but that differences in the direction of travel are true differences in kind.

These translations and uses of closed systems of notation function like Paul Ricouer's[5] analysis of metaphor, where he holds that metaphor is a mechanism by which new meanings can emerge in language - to the extent that where a term is used metaphorically, it is standing in for a word that does not exist.

By engaging with this mechanism of translation and transcription, my explorations continually open new meanings, new correspondences between places - and demonstrate that by inscribing we are actively understanding, not simply passively recording.

Part 2: Inflecting Space and Archiving Sound

My current research is with the *Inflecting Space* project, an AHRC speculative research project lasting one year. The project is led by Richard Coyne in architecture, with Peter Nelson and Martin Parker in music. The aim of the project is to establish the field and methodology for further research into the spatial qualities of the human voice. In order to investigate this, our collaboration between music and architecture has engaged in a number of field recordings and installations. The field recordings are of public spaces such as railway stations, department stores, street markets and auction houses. Such a study also implicates communication technologies - particularly the ubiquity of the mobile phone.

One way into theorising this contemporary extent of the voice has been to turn to sound design and film theory, particularly that of Michel Chion[6] and Jean-François Augoyard[7].

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[5] Ricoeur, P. 2003. *The Rule of Metaphor*. Trans. R Czerny, K McLaughlin, J Costello. London: Routledge.

[6] Chion, M. 1999. *The Voice in Cinema*. C Gorbman Trans. New York: Columbia University Press.

[7] Augoyard, J F. 2005. *Sonic Experience: a Guide to Everyday Sounds*. Montreal: McGills University Press.

Chion's theory of the acousmêtre has proven instrumental in our understanding of the sonic environment, offering ways of understanding the potential power of a voice - normally a point-source - when given the ambient qualities of a railway station Tannoy broadcast. This blanketing of space with voice is a peculiar sensation, and gives the voice an authority akin to being the 'voice of God'. Close inspection of railway stations has demonstrated that this power is adopted by staff on the ground, who adopt a different posture in order to embody this voice for themselves.

Of primary interest is the quality or *grain*[8] of the voice. This is where the interest in inflection from the project title originates. Rather than looking at the content of *what* is said, we are much more interested in *how* it is said. Patterns of inflection tell us a great deal about the amount of attention that is demanded by the animated voice of a market vendor compared to the property of a flat inflection by users of a railway station to carry a conversation in competition with much louder sources nearby.

One part of the project's methodology has been to construct listening experiments for subjects to respond to. Taking account of the artificiality of listening to a binaural recording rather than the experience of a place, we asked respondents a number of questions regarding our recordings of Waterloo station and a Tokyo Department store. A number of these questions involved prompting some visualisation of the sounds.

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[8] Barthes, R. 1977. *Image Music Text*. S Heath Trans. London: Fontana Press.

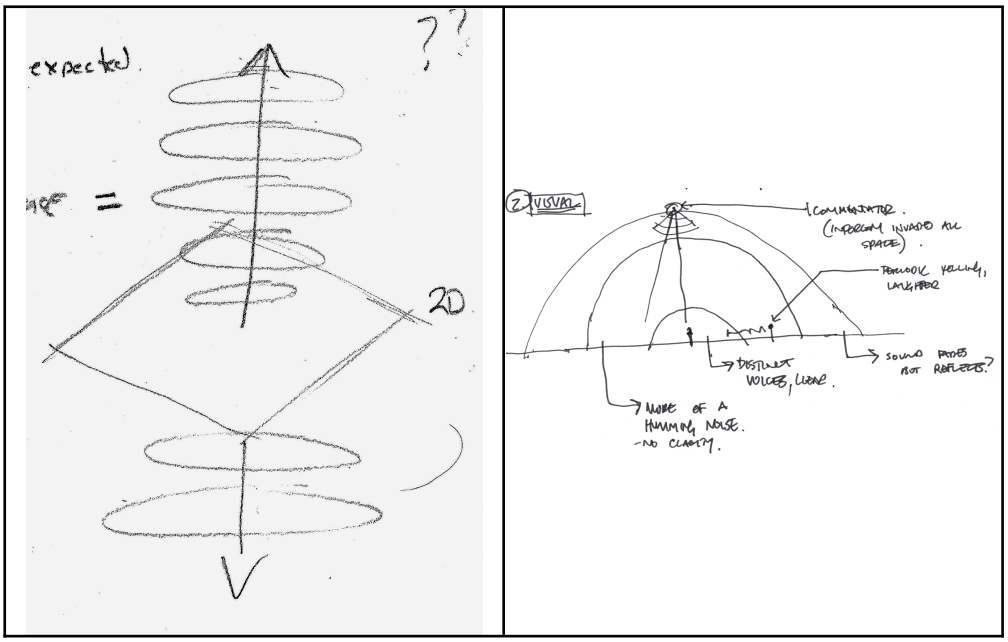

figure 6: visualisations of the sound of Waterloo station.

The difficulties in providing such visualisations cut down disciplinary lines fairly distinctly. As expected, those with more visual training such as architects found little difficulty with such a task. Sound designers with more digital experience also found the task to make a great deal of sense, based on the visualisations they were accustomed to from working with wave forms and spectrograms depicting sound on a day-to-day basis. More difficulty was found in the case of more traditional musicians, who struggled with the gulf between traditional musical language and the sounds of environmental recordings. More than this, however, the *point* of the task was questioned by this group of participants - something that is instrumental in my point with this paper. That architects and sound designers could see some benefit in scoring the qualities of an imperfect environmental recording was instrumental in their attempts to interpret the material in a visual manner.

> RL: Actually visualising the space - that was very difficult, then for you?
>
> DM: Yeah, I found that very... I sort of resorted - it just seemed to me, I was looking for different imagery that would somehow represent what I was trying to convey and there was nothing - it was difficult drawing anything that was going to do it justice, I just had this - it just seemed like this plain.
>
> I wouldn't say the space was coming across as something three dimensional with layers: it just seemed to be a plain in which one - something would sweep over you from one

> direction and then something would sweep back across from another and you just seemed to be in the middle of these things kind of sweeping - and you were moving in and out of them, they were kind of sweeping over you and then off into the distance again and something else would sweep in from another direction, and back out again - in a tidal - like way. Very, almost being swamped in these sounds.
>
> DF: What I wrote down was these zones of sound that were kind of... even within my periphery. So there is an intimate zone around me where when the English guy walks by me, he's not raising his voice, but its very clear and I understand him.
>
> Transcript from listening exercise with Dermott McMeel & David Fortin, 15/3/06.

Inflecting Space was instigated with the practice of sound designers in mind, and in particular, a desire to take elements of sound design away from its controlled production and performance environments and out into real, live architecture once again. Two elements of our study emerge from this interest: the first is a follow-up series of installations entitled *Vocal Ikebana*, the second a series of interviews with the archivists of the British Library's Sound Archive.

The installations of *Vocal Ikebana* sought to decorate a space with the voice recordings from earlier experiments. More specific voice recordings were employed at this stage: one environmental recording of a bustling antiques auction, the second a recording of a telephone train booking transaction, and the third a studio recording of an actor reading out stock market data in a flat, even tone. The room was set out with a table in a central position, and three portable battery powered speakers arranged in a row. After an exercise of assessing each voice in turn, the participants were asked to arrange the voices around the room in a decorative manner. After this, they were asked to draw and describe the results and their design process.

This was a fairly intensive experiment time-wise, but when offered the task of designing with sounds, a number of interesting results emerged. Whilst some participants could design easily and with some sophistication straight away, others had a somewhat more extended engagement with the task that implicated their drawing more directly.

Still not sure if it would be the definitive one - I wanted a background (speaker 2) linear and more volume. And break the environment with number 3 on my left (for some reason I prefer the unusual sound coming from the left more than right).

Not sure what to do with number 1 (specially because I didn't like it) so less volume. Also like the background on my back and towards windows.

Camelo, N. Vocal Ikebana Questionnaire 2.

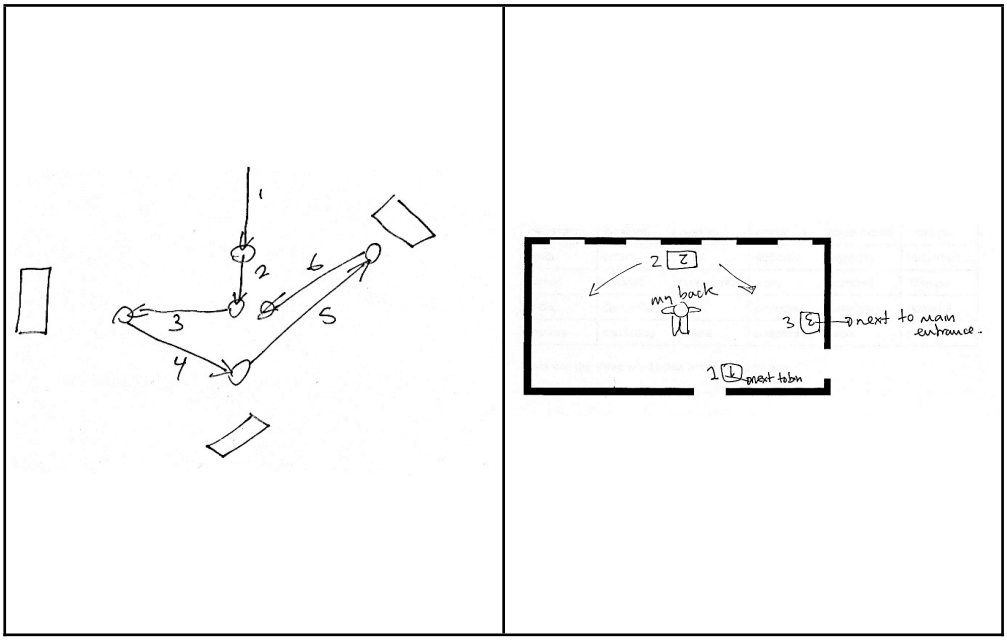

figure 7: diagrams depicting the design process.

This design was achieved with constant reference to the drawing of the original scheme, and leads to a series of questions: to what extent is the drawing process itself implicated in design, especially the design of non-visual environments such as this one. This is one aspect we are looking to investigate with our next sound installation at Edinburgh University's Matthew Gallery later this month.

Another aspect of working with sound designers in mind is related to archiving materials. Beyond the ethics of re-using audio materials recorded on the fly, or at a time when such re-use of materials for creative purposes wasn't envisaged; a range of other issues regarding sound emerges.

The digital media cluster at Edinburgh have recently established a digital repository for files including still and moving images, sound, text and collections of data. This project is called *Infrar.ed*[9] and is largely the work of researcher Henrik Ekhaus. This repository allows members of the associated departments to store materials, either complete and finished works, or as raw unprocessed recordings. Material on Infrar.ed is stored under the Creative Commons License[10], allowing its use by others so long as the author is credited. There are options to limit this, of course - but in principle, the repository should function as a library of materials open to further interpretation by other creative practitioners.

This becomes particularly interesting in the case of sound design once again, as it may be the quality rather than the content of a sound that is of interest. In visual work, say a 3D computer model, an Infrar.ed user might search for textures to apply to their work. By selecting the type of files they are looking for, the user can swiftly compare relatively large numbers of images simultaneously in order to select the most appropriate one for the job. In the case of sound files, however, this is frustrated by the temporal necessity of listening to each sound in turn. The speed and convenience of visual selection - at least initially - is not possible despite sophisticated previews built into the system.

Several possibilities exist for this, and were discussed in depth with archivists from the British Library Sound Archive as possibly ways of allowing such searches to take place. Our proposal is to generate wave forms, which show the frequency at each point in time of a sound; spectrograms, which graph the quantities of each frequency over the entire file, and finally melograms. Melograms are plotted over time, and display the degree of change in the inflection, up or down. This is useful for selecting sounds which are animated or flat, with particular patterns of rising and

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9 http://blue.caad.ed.ac.uk/infrared/

10 http://creativecommons.org/licenses/by-nc-sa/2.5/

falling inflection. Finally, the content can be displayed as text meta-data, which is searched using familiar search engine technology.

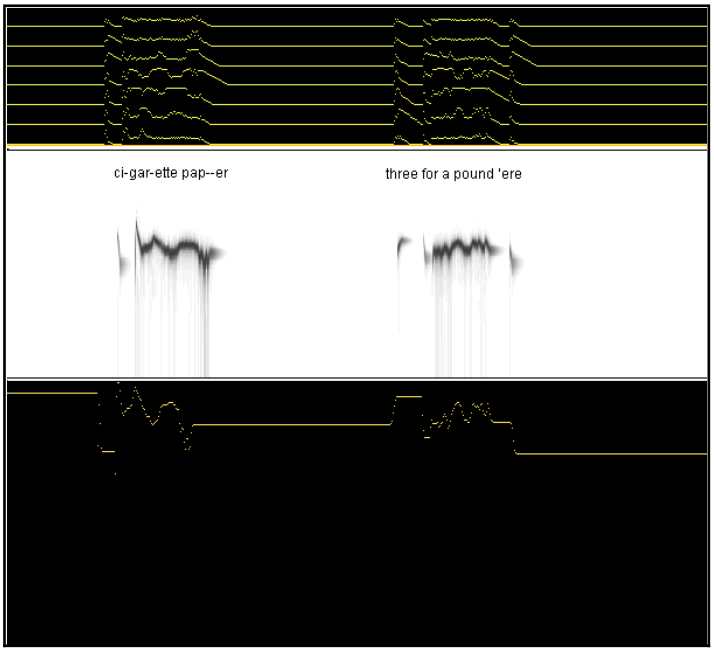

figure 8: melogram of cry of Barras market caller.

It is telling that in our early experiments, that respondents who had no reason to visualise non-musical sounds using any sort of graph or notation found the task much more difficult and abstract, whereas groups of practitioners who had some experience of visualising non-visual phenomena, or working with sound digitally, took to the task much more readily.

It is also interesting to note that there are shortcomings in dealing with such material as raw sound files only in the literal sounds. Sounds by necessity have a particular duration, and shorthand ways of searching through vast amounts of material such as that stored on Infrar.ed becomes essential for the repository to work efficiently. Abstracting sounds into images is important as it allows the benefits of such presentation, such as simultaneous comparisons, to be achieved relatively easily.

More importantly, design is still understood to be a visual and drawn activity - even where the aim of the design is entirely sonic and decorative, a significant number of respondents had recourse to drawings in order to develop and refine a design strategy.

Part 3: Conclusion

These two examples serve to underline the nature of inscriptive practices as forms of understanding, as adopting a position towards a given phenomenon. This taking up of a position is crucial to our regard for such inscriptions as forms of theory, as expositions of a particular understanding, rather than assuming some neutrality in description. This neutrality is never really possible, so it might be wise to consider the drawing, diagram, notation and graph as always representing a theory, rather than only potentially. Whether this theoretical content is recognised or not is another matter, of course, but one enters into similar debates about the universality of understanding a perspective or plan drawing. These forms of understanding are culturally specific, and simply by using these means, our marks become meaningful. The potential for drawing and the other inscriptive practices, then, is to form theories on completely different terms from the written word, theory in a form often more appropriate to the discipline at hand, such as the understanding of space in architecture, be that through the capture of movement, or the comparison of inflection in the human voice.

Given that a drawing cannot help but be theoretical, the challenge then becomes how to best exploit this creative opportunity.

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