

## SOUND AND THE ENVIRONMENT

### Introduction to the Work of the Dog Rose Trust

Our point of departure was as an architect and an architectural historian. Now over twenty years later we can add much exciting experience. We have run an early music festival, designed and published books on architecture and design and still do; we run the local Georgian Group but mostly we work very hard running the Dog Rose Trust. The Dog Rose Trust was formed, together with its trustees sixteen years ago.



*Recording in Winchester Cathedral with the Jecklin disc.*

This was after Dog Rose Sound had worked for about six years for the University of Birmingham on the projects *Cathedrals through Touch and Hearing* during which project we wrote the scripts and recorded binaurally guides for blind visitors for nine cathedrals.

After the unique and extended experience of working on sound for blind and visually impaired people the Trust was formed. At this point work with other senses began.



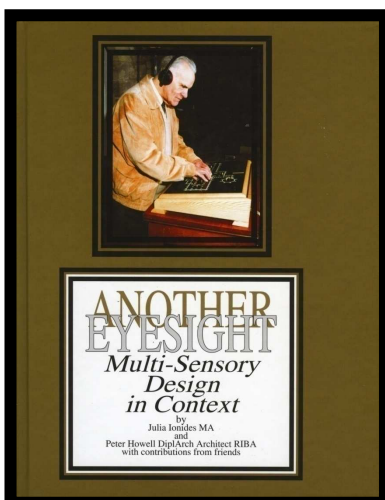
*Recording in the Houses of Parliament with a 'dummy head' made from a converted outdoor light fitting*

The legally declared aim of the Trust is (in charity speak):

*The relief of persons who are perceptually and cognitively impaired*

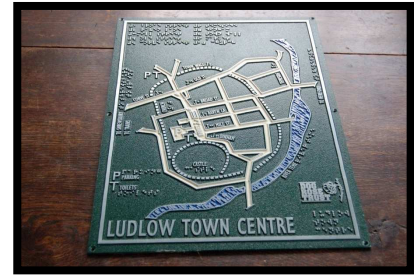
and its technical aims are set out in the Trust's book, *Another Eyesight, Multi-Sensory Design in Context*, which we wrote and published. In essence we support Universal Design and multi sensory communication.

The work of the Trust has been mainly in the field of communication with blind and visually impaired people. This has taken the form of design using sound and touch. This amounts to a lot of carefully designed sound and tactile



forms. Our interest in all environments, which is where we came in, is broad and to us very important and critical and remains with us.

*A tactile map of our town that can be used by all*



## Wayfinding and the Use of Sound

Our view is that the concept of ‘Wayfinding’ is the beginning of an understanding of the design of space for humans that needs to be developed. In some ways, after the publication of the book *Wayfind, People, signs, and Architecture* by Paul Arthur and Romedi Passini<sup>1</sup>, ‘wayfinding’ has been quite rightly well used and is the basis of what is now a separate discipline. However, this needs to be extended to cover all senses and to help everyone.

However, this is only a beginning! The design of space and its sound is critical to blind and visually impaired persons and is more important than we realise for the so-called normal person. It is also true to say that space must be designed using every sense and using the concept of Universal Design the design should be for everyone.

‘Every sense’ you might ask, then for example the smell of Thomas the Baker in Lendal, York is a place that everyone knows and enjoys and is also used as an ‘aroma icon’ to locate the main post office. Most of our blind friends here use it as a ‘beacon’ in their navigation.

As Juhani Pallasmaa wrote, in the Preface to our book *Another Eyesight*, ‘Our Western industrial culture is undoubtedly dominated by the issue and the proliferation of visual imagery’.<sup>2</sup> Sight, since the renaissance has become the primary sense and the trick of flat perspective has been found to be quick and cheap to produce. Sound and smell are not so cheap.

Sound has been almost completely ignored except for music and yet sound adds information to the seen world much more than is generally appreciated. It is also a major component of ‘wayfinding’ for everyone.



*The Dorcas Project, an interactive tactile plan for wayfinding, in use at the Houses of Parliament*

In fact sound was so out of control in the 18<sup>th</sup> and 19<sup>th</sup> centuries that there was much legislation to control it. We should reverse this need to isolate ourselves from noise by removing the noise. This isolation of enclosed environments encouraged the performance of music in private. This also made it possible to make money from music more easily. Theatre and music was taken off the streets and made into an industry. Surely we can put at least some of this back

where everyone can enjoy it. It is only with such radical thinking that we can design and construct a new hearing environment.

However, we have to understand the environment and as R. Murray Schafer<sup>3</sup> says, noise has increased since industrialisation. Further he talks of ‘Sound Imperialism’ which covers the extension of an empire of imposed sound where organisations and businesses do what they like. Simple examples are the ‘industries’ making money out of aeroplanes, motor cars and advertising.

If we could clean up our act and in various ways reduce the unwanted sound we could reintroduce sounds that are generally thought to be good, together with other adventurous ideas. By the consideration and design of sound in spaces we could add to the pleasure of living. And we could make the environment more efficient by helping ‘wayfinding’ for everyone and without much extra input help blind and visually impaired persons. If we also make the environment more visually explicit we can also help everyone including those who are deaf or hearing impaired. Very few signage systems are complete or effective. We are all one species whether we are perfect or not so why can’t we catch hold of the situation.

It would seem useful to think in terms of free or open space and this effectively what we now see as public open space. It would be wrong to expect that we can totally eliminate the social problems of public open spaces since human nature is far from well designed. Examination of the various controlling legislation past and present could prove a useful research project. On the other hand moving from the general to the specific our personal experience of scripting and recording descriptions of the walkways alongside the Thames has been very exciting and very promising.

People walk happily past buskers and various performers and the whole ambience draws people together and along the routes.

*A busker on the South Bank outside Tate Modern*

Walking is becoming important again – no fumes and no noise - and if this is so we should be providing environments that are suitable for walking. Or even just being there and enjoying it. Sound is the key to this. We need open space with sound. We need to walk and talk not just to sit and shut up. We also need silence with accompanying natural sounds. In a natural situation there is quiet and the natural sound of our environment and we begin to understand the ecology of our natural world. We need to live with the ecology of our environment whether natural or man made.



### **Historic sound**

There are places where the environment has been part of sounds. For example there is the band stand and the battle field. We can accurately reconstruct these in

sound. There is the baroque statue that has seen interesting events. There is the church that has heard beautiful music. All can be reconstructed; in fact the church itself need not exist any more. We have often wished to reconstruct the sound of Wenlock Priory which has a west wall but little else. With reconstruction of the sound the positioning of the visitor could command the acoustics so that one could hear as one would have done in position as when the building existed. With sensors statues can react to the presence of people; they can tell their story with sophisticated sound constructions. Some buildings have been changed since interesting music was made in them and one can then replay music as it would have been heard.

### **A reactive Environment**

Given pieces of reality that can be used for spatial location, such as sound reflecting forms, these could also have a life of their own through sensors and certainly they could be related to a tactile model of the adjacent environment. In many cases these can be electronic forms rather than virtual. Work with prototypes in public open spaces could provide us with information on which to base design.

If we go back a while, then music, theatre and ballet were not known by these words but were simply sound, drama and dance and it all took place in the streets. So what happened? In the time of Shakespeare performers had to be attached to important people. As Peter Ackroyd says in his book, *Shakespeare the Biography*, in an Act of 1572,

... vagabondes including all fencers, bearwards, common players in interludes, and minstrels, not belonging to any Baron of the realm or towards any other personage of greater degree ... could be whipped and burned through the ear.<sup>4</sup>

There are surely other ways of getting undesirable performers off the street. It certainly encouraged the building of theatres! Currently theatres have a problem because they cost so much. One wonders what investors will do now.

### **Free Presentations**

Examples set in a 'free' environment are not difficult to find. Recently we have spent some time in South Africa recording the Venda people. It so happens that a very good ethnomusicologist by the name of John Blacking lived with the Venda people and made the following point.:

Music can express social attitudes and cognitive processes, but it is useful and effective only when it is heard by the prepared and receptive ears of people who have shared, or can share in some way, the cultural and individual experiences of its creators.<sup>5</sup>

Our own experience, recording the Venda Domba ritual, was that it was more an act of social cohesion than performance. Similarly, the Tshikona could be referred to as the Venda 'national dance'. It is performed on all important occasions, and expressed the value of the largest social group to which a Venda felt he or she belonged. Its performance involved the largest number of people, and its music



incorporated the largest number of tones in any single piece of Venda music involving more than one or two players. When we saw the Tshikona in December last 135 boys and men of all ages were taking part - it was a sharing that we could learn from! For this we need free presentations that is without barriers.

*Recording the Domba in Venda*

*Young people performing the Tshikona in Limpopo, South Africa*



### **The need to design sound**

In academic terms the origin of silence in music has its notable introduction in four minutes and thirty three seconds. This is a piece by John Cage in which the pianist sits at the piano for four minutes and thirty three seconds and does not play. This is simply silence, one might argue, but in reality it is a situation which allows other sounds into the enclosed situation of the concert hall. In many ways this is part of a re-realisation that sound is important. If we go back to Paris in the 1950s and the work of Schaeffer and to some extent to the work of Varese some time earlier we see the evolution of 'musique concret'. Pierre Schaeffer used 'wild' sound and cuts it together on tape. It was a new and important event. Maybe it was the reverse and it was simply 'wild' music trying to escape from the enclosure of concert halls and studios. But then how do we design sound?

### **History of Music**

The origin of music is obscure but was originally the same as other animals. The first instruments, it is agreed, were very simple. Reconstructions of the human sounds or music are available. John Purser in his book *Scotland's Music* in the first chapter describes the situation very well.<sup>6</sup> This history is a long way from commercial music now. Nevertheless, we are at last going back to the point where we realise that there are instruments with acoustic characteristics being played in places that also have acoustic characteristics.

### **A reactive Environment**

Given pieces of reality that can be used for spatial location, such as forms that reflect sound, these could have a life of their own in an environment. In many cases these could be electronic forms rather than virtual. Through electronics and sensors they could be come modular units. Certainly they could be related to a tactile model

of the adjacent environment which would extend the use of space to everyone. Work with prototypes of such devices in public open spaces could provide us with information on which to base design.

There is a large body of information on the design of sound which we must look at. However, we must be careful not to lose the freedom that we need because sound without freedom will take us back into unnatural enclosures. Enclosures can be used but have a different function. The use of acoustic adjustment by physical means can also be used, for example a band stand does this and also more subtle shapes and focuses. Many of these physical adjustments can now be achieved electronically as is demonstrated in pop concerts in fields.

Often hidden away from us music is still being made. For example 'Garage bands' are no longer a joke. Many small bands have very good electronic equipment and make their own CDs. There are magazines such as *Computer Music* that provide very good information suitable for the 'garage band' and indeed sufficient for very sophisticated music making. Given a small amount of equipment then these bands could make contributions to sound in our open spaces. There are probably other sources of sound that can make a contribution. The BBC has accepted that there are alternatives to romantic and commercial pop music and has instituted at least two programmes where alternatives are played and discussed. One is 'Mixing It' and the other 'Late Junction'. Nevertheless, the BBC still has a very old fashioned view of music.

### **Youth Music**

One of the most notable musical events that has happened in this country is the encouragement of younger people to make music through the project 'Youth Music'.<sup>7</sup> This has had tremendous success. This could surely be repeated with 'non' youth performers. The history of Jazz and African music, which are quite different, have grown in simple situations but, of course, not with simple minds.

### **Summary**

In summary, in the short amount of time we have had it was impossible to set out the case for a sound revolution but there are some suggestions. We need to examine the function of sound particularly in open space and provide research and equipment to encourage its use otherwise sound will be forgotten, as it has in the past, and everyone's life will be the poorer. We need to encourage people to think sound and to make it.

### **Points for specific action**

*We feel that there is a need to deal with the following particular technical sound problems:*

- a. To consider three dimensional sound in space and its appreciation. To examine the practical use of 5-1 recording for survey work and spatial representation to simulate space for sighted and unsighted persons. Also, similarly, to consider recording and use of binaural microphone devices.

To consider sound in a three dimensional form particularly for blind and visually impaired persons.

- b. To consider the design of sound icons and their use and function in space.
- c. Consider the design of devices and Sound that could be generated by natural forces, for example wind in an Aeolian harp. Also to consider reflecting devices such as a focusing wall for presentation purposes. Another example, Jon Rose and the Great Fences of Australia. [http://www.jonroseweb.com/f\\_projects\\_great\\_fences.html](http://www.jonroseweb.com/f_projects_great_fences.html)
- d. To research techniques to examine the acoustic character of spaces in relation to the activity contained in a 'place'.
- e. To examine the use of sensors and the provision of circuitry and weather proofing packages that can play back sound to make reactive situations both inside buildings and out. To consider this in connection with historic sites.
- f. To explore the use of devices such as mobile phones and similar, and those devices concerned with ambient information for use in spaces.

Julia L Ionides and Peter G Howell, April 2009

The Dog Rose Trust  
83 Greenacres  
Ludlow, SY8 1LZ  
Tel 01584 874567  
e-mail [peter@dogrosesound.org](mailto:peter@dogrosesound.org)

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<sup>1</sup> Paul Arthur and Romedi Passini, *Wayfinding – People Signs, and Architecture*, Ontario, 1992.

<sup>2</sup> Juhani Pallasmaa wrote an important book on multi-sensory design, *The Eyes of the Skin, Architecture and the Senses*, in 1996; it was reprinted in 2005.

<sup>3</sup> R. Murray Schafer, *the Tuning of the World - Our Sonic Environment and The Soundscape*, Vermont, 1994, p.77.

<sup>4</sup> Peter Ackroyd, *Shakespeare The Biography*, London, 2006, p.124.

<sup>5</sup> John Blacking, *How Musical is Man*, Washington, 1973

<sup>6</sup> John Purser, *Scotland's Music*, Edinburgh, 1992.

<sup>7</sup> The Arts Council set up Youth Music in 1999, with £30 million of lottery funding.