Stockholm Soundscape Project
New Directions in Music Education

By Robin McGinley

Introduction – Tales from an Accelerated Culture

"The modern environment today produces many new sounds. For example, the mobile phone I just bought gives off a lot of sound/sound effects. When birds hear these sounds they can't tell whether they are coming from nature or from IT, and they start to imitate these strange sounds. Why do we have to manufacture such sound, which is really a 'noise' in nature? This is what I think about whenever I sit with my mobile telephone!!"

– Extract from a student Sound Journal, September 2000.

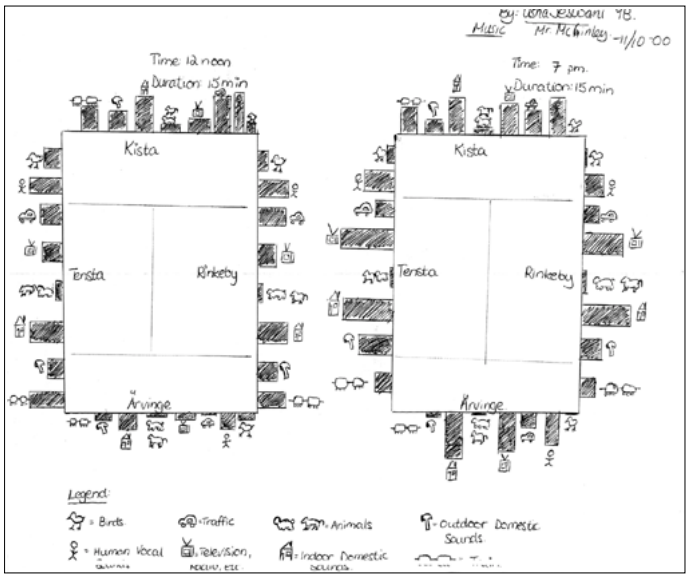
The challenges facing today's experimental music educator are increasingly different from those of any other period. With the proliferation of information technology and mass communications media and the ease of access to the Internet, computer games, mobile phones and hundreds of TV channels broadcasting around the clock, the outlook of the student body in any hyper-developed Western country is changing radically.

Many students today are computer-literate and able to handle more information at a higher rate, and for the most part they listen to music through means of electroacoustic reproduction. This situation is, of course, a mixed blessing—the fact that access to more information seldom equals better quality information (improved signal-to-noise ratio) needs no qualification.

What follows are notes towards the documentation of a practical project, with the principal intention of finding ways of extending and developing new approaches to creativity within the framework of a secondary music curriculum. The concept was to take techniques and methodologies developed by the acoustic ecology community and use them directly (in the first instance) with secondary school students.

As an experimental music educator, much of my work has involved encouraging groups (in schools, colleges, and in the community) to realize some of their potential as composers and performers. This project not only raised students' awareness regarding the operation of (and problems facing) their acoustic environment, but also actively promoted imaginative problem-solving and creative responses to information received from the world outside.

I might add that although this project deals with some acoustic ecology issues, it is not intended as a meditation on the aims of acoustic ecology. It is my opinion that without direct intervention (within areas such as education) Acoustic Ecology becomes some kind of social science concept, or at best a pious hope. For too long soundscape studies have been almost the sole province of academic research departments. By engaging in this work, younger students take these issues away from the classroom and out into life. Furthermore, the quality and diversity of the work produced for this project showed me that the students involved saw the value of the assignments and enjoyed doing them.



Sound Map 3: by Usha Jeswani, Autumn 2000

The Stockholm Soundscape Project at Engelska Skolan Söder

The project was conceived for, and executed by, sixty 15 year-old students at Engelska Skolan Söder (The English School) in Stockholm over a period of about six weeks in autumn 2000. It encompassed a number of strategies and techniques broadly addressing key areas and concerns of acoustic ecology. The aims that were central to the creation of the project can be grouped under four premises, which will be referred to throughout this document. They are as follows:

Awareness—The general aim was to raise the students' awareness of their sound environment, while discussing related factors such as noise pollution legislation (and those responsible for making such laws). Basic acoustic and psycho-acoustic properties, together with elementary sound recording techniques were also discussed, laying the foundation for a multi-disciplinary approach to the work.

Research and Documentation—The assignments that the students were asked to complete were based around the concept of

research and documentation of the soundscape of Stockholm throughout the duration of the project.

This brought the focus of the students' work very much into the present tense. There were no books to consult, or historical facts to remember. Furthermore, the work was contingent on the actions of the students themselves, thus introducing direct, experiential learning, which is the approach best suited to an artistic subject like music. Many techniques were attempted, some of which are outlined below.

Listening Skills—Most of the students in the group would traditionally probably be described as non-musicians, whose listening habits mostly involve popular music of US/UK/Swedish origin. By engaging in this work, their aural perception not only began to include the sounds around them (for the first time in the case of some students), but also offered a gateway into the sometimes 'difficult' soundworlds of contemporary and experimental music.

Creativity—The British composer and community arts activist Trevor Wishart recently described creativity as 'transcending your limitations in some way by the use of your imagination.' (Stollery, p.31), and it is a definition such as this that should be kept in mind when considering this project.

All the assignments were devised to provoke a creative response in the participants. The instructions and guidelines were formulated in such a way as to give the students considerable autonomy and allow them to explore their own thoughts, ideas, solutions and discoveries. Discovery is of key importance in the creative process, and through engagement with creative issues it was hoped that students would learn something about themselves and the world around them.

The work

To begin with the students were shown a large satellite photograph of Stockholm and they agreed that from a distance of several hundred miles the city would seem rather silent, but that down where we were the situation was quite different. Following preliminary discussions about some of the basic concerns of acoustic ecology (the current state of the sound environment, the increased noise levels of the modern world and so on), the project was delivered through the following four assignments:

1. Sound Journal

In a primarily visual culture it is clear that many students do not fully take into consideration the amount or significance of the information they receive aurally. The sound journal was therefore an exercise designed to introduce the concepts of appraisal and documentation of the sonic environment.

Each student in the project was asked to keep a sound journal for five days, in which they were to identify and react to the sounds they heard around them. The work was to be carried out in any location of the student's choice, in the street, on the bus or train, at home etc., thus giving a representation of sound descriptions and reflections throughout an average school week.

The instructions given to the students beforehand were puposely slight and lacking in detail, thereby giving each individual considerable freedom in terms of the form, detail and style of the document. The idea was for each student to find his/her own style for the somewhat difficult task of describing his/her experiences of sound, experiences that cannot always be easily expressed in words. The basic concepts of the assignment were outlined (as above), and several examples of sound journals from the World Forum for Acoustic Ecology website exemplifying different styles and approaches were presented. There were no detailed directives or illustrated stylistic examples, and the assignment was written entirely outside of the classroom, as homework. The situation was analogous to a piece of experimental or indeterminate music where much creative autonomy and choice is given to the performer, and the results were as diversified and unique as the personalities that had created them.

The following examples are a selection of excerpts from the sound journals that the students kept over the course of one week during August 2000.

Coming to a screeching halt—Veronica Atterham (9A)
I was waiting for my train, half-listening to the multitudes of conversation around me. Someone was yelling at the other end of the platform, but the words were drowned in the sound of an incoming train. Another person with hard soles was making a clip-clop, almost "horse-walking" noise as she hurried towards the escalators. She was talking into her mobile phone, her free fingers snapping impatiently. A group of teenagers were toying around near the edge. They were babbling loudly and laughing even louder. And from further down the tunnel came the unmistakable sound of an approaching train. It screeched. The old metal track whined. The motor roared tiredly. From the speakers someone tried to say something in a shy, un-hearable mumble. It was easily drowned by the other sounds. The train blew into the platform area; its brakes screaming shrilly. People stepped up and moved towards the white line.

The wind caused from the train blew around, pushing at people, ripping at clothes and paper, but not strong enough to do damage. The train's brakes screeched, a sound growing louder and shriller every second. The tracks whined, and the wind blew. Finally, the train came to a screeching halt. The sudden quiet was soon broken by the "ppshshhhh" of the opening doors. Then the people started moving again. Noise fills the subway.

Tuesday, August 29th "On the bus"—Linda (9A)
Wow, I never really thought about it, but the bus is a really noisy place. When I first got on, and started thinking about what I can hear I was shocked. I couldn't believe that I had been on this bus every morning for 2 years and never noticed all of the sounds. People are almost shouting, trying to be heard over all the noise. Every now and then the bus driver picks up the mike and says, "Next stop, Huddinge". On the seat next to me is a young boy listening to his CD player. It is so loud, even I can hear it. The most obvious sound is that of the engine. Outside the window cars are roaring by. After every stop the bell rings again, because somebody wants to get off. Finally my stop, it was really nice to get off that noisy bus.

Thursday, August 31st , Stockholm, "the sounds of conversation and traffic"—Christoffer Brenning (9C)
Being able to communicate and to carry out a conversation is an important part in our everyday lives. When you're standing in a public area what do you hear? The sound of chatter. Whenever we go out it's not unlikely that we will hear the sound of people talking to one another. When I was sitting on the bus today, like many other days, I heard this noise of several groups of people carrying out conversations. When I heard it I interpreted it as a blur of different frequencies from the different voices made by the different people. If you listen carefully you can distinguish one voice from the others and make out words. Naturally, this depends on the quantity of people that are talking. If there are few people then of course you can tell their voices apart, but if you're listening to twenty or so it can become very difficult. Of course, this particular noise can be heard in almost any public area, like a store, a school, a restaurant etc. In a way, listening to

the traffic in the street is a lot like listening to a conversation. There are different frequencies from different cars making different noises at the same time.

Thursday, August 31st —Mona (9C)
Boom, boom. Can't this noise ever stop? Tick, tock. Boom, boom. I can never sleep. I can never think and I can never concentrate. That sound keeps on booming (actually it ticks, but sounds like a boom, because it's so loud). The booming sound keeps on going on and on for 24 hours and seven days a week, without any rest. (Well, I could take the batteries out, but then I won't come to school on time).Tick, tick. Boom, tick, boom, boom. Every time the clock ticks, it sounds like the whole world is falling into a black hole, and it can never stop falling.

Tuesday, August 29th, Lightning and Thunder!—Mikaela Navotny (9B)
Lightning . . . a rustle of leaves, the cracking sound of raindrops as they hit the ground . . . and then from nowhere the vigorous sound of thunder . . . I shrank, though I've heard the sound so many times before, I couldn't help it. Alone in my house (or I heard the tripping sound of cat's claws on the floor, so the cats were home). I turned on the radio . . . bzzzbzzz . . . no, just another guy playing guitar on some miserable tape recording (switched off). Once again, I heard the powerful sound of thunder, it sounded like someone beating on a big drum. From my window I saw more lightning. Now it was close, perhaps right above me. But I'm not scared of thunder, I just dislike the thought of being alone. I hear my own feet walking across the floor and it feels as if the thunder and I are in competition, one trying to make itself heard above the other. I heard the creaking sound from a door pushed open. My cat Nadia is coming into my room. She is probably a little bit nervous as well. But now we're two, and then we're okay.

Sound Map 1: by Veronique Flis (9B), Autumn 2000

I was very impressed by the scope and quality of the work produced, much of which demonstrated a depth of engagement with the soundscape that I had perhaps not expected to find in the first attempts at such an exercise. Many of the students wrote about the sonic contexts that constituted their daily existence with a fluency and competence that had developed over years of interacting with sound at a number of emotional levels. It seemed, however, that until they had been directly asked to think and write about such experiences, many had not realized the extent to which sound was a significant factor in their lives, and several of the entries included references to such a realization.

Another notable occurrence was the number of different literary styles and techniques the students utilized when discussing sonic situations (often within the same document). Some chose straightforward lists of sounds with very little contextual information, others were more inclined to longer sections of descriptive prose, effectively delineating sound, emotion and context. Still others broke into poetry or verse, and there were a number of examples of detailed time measurements relating to the duration over which an entry had been written. Some even found it necessary to devise simple pictorial systems to portray parameters such as dynamic level, timbral quality or spatial orientation.

The results of studies such as this would appear to have a number of possible applications beyond the discipline of music, and these documents could equally be read and analysed from the point of view of social studies, or communications and information science. Of primary importance, however, was the original educational aim to encourage students to engage on a very direct level with the sounds around them, thus attempting the challenging task of effectively freezing a moment in time, distilling an experience or an emotion, and documenting in words something as ever-changing, restless and dynamic as a soundscape.

2. Sound Map

The instructions for this activity were designed to be as simple as possible, delineating very little apart from the basic concepts of the activity. Once again, the reasoning behind this was to provoke a creative response in the student and get him/her to engage with the exercise on a deeper level rather than simply following instructions.

In an appendix to R. Murray Schafer's landmark text on soundscape studies *The Tuning of the World* (1977) there are a number of examples of what are described as sound maps (Schafer, pp. 264-267) under the heading "sample sound notation systems". These were shown to the students, and even though many of them are based on precise sound-level measurements and complex scientific processes (which was not necessarily the point of this exercise), they gave a number of effective examples of how the assignment could be tackled.

Like the sound journal, this assignment challenged the students to investigate and then document a sound environment, or sound event of their choice, the difference being that whereas the first assignment had involved documentation through prose, this one involved the presentation of a three-dimensional sonic space through the two-dimensional space of the page. The skeletal instructions accompanying the sound map examples are included below in full,

and were again designed as a kind of text-score, allowing maximum opportunity for creativity and the use of sonic imagination.

Make a SOUND MAP of an area or location of your choice.

- A SOUND MAP shows two things:
  a) A geographical location or place.
  b) The sounds that have been heard in that location.
- There are many different ways of creating a SOUND MAP. There are a few different examples included here. You may want to use one of these methods or invent a method of your own.
- Your SOUND MAP should be on one side of A4 or A3 paper.
- There is no wrong way to make a SOUND MAP.

3. Field Recordings and Interviews

The third phase of the project brought together the themes of research and documentation common to the other two phases, and took them out of the classroom in the form of field trips. Each of the four classes chose a location in the Greater Stockholm area and carried out two activities in it. The first was to make recordings of various sounds in that location, and the second was to approach members of the public on the street and ask a number of prepared questions about their listening experiences that day (up to and including the time of the interview).

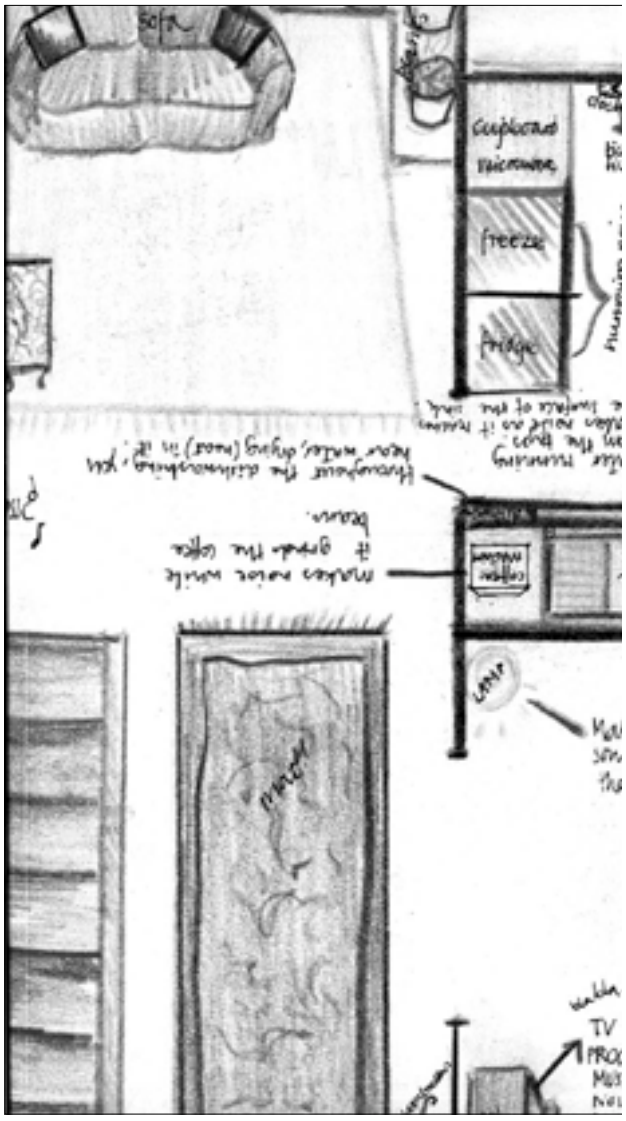
The students' choices of location turned out to be very different from one another, with each location offering its own unique sonic characteristics . One group chose Kungsträdgården, a large public square with fountains, benches and cafés near the Royal Palace,while another group chose Hötorget, a market square in the centre of the city. A third group chose to exploit the fact that central Stockholm is built on an archipelago of fourteen islands and voted to carry out the assignment on the Slussen-Djugården ferry. The last group chose to record in the precincts of Farsta Centrum, a large, modern suburban shopping mall.

Each class was split into two groups, each group being responsible for one task. The sound recordists were asked to find sounds which they felt were in some way representative of that location, and make close-miked digital recordings of them lasting several seconds. In a similar fashion to the previous assignments, they were making a document of their experiences of the soundscape, this time through the medium of sound itself.

The interviews with members of the public passing through the chosen location were of a slightly unusual type. Acknowledging the fact that these project assignments were to be carried out in the 'present tense', many of the questions asked focussed on what the interviewees were listening to while the interview was being conducted.

I explained to the students that both the questions and the responses were to be recorded in much the same way as a location interview conducted by a radio journalist. The resulting recorded documents thus consist of two people discussing a soundscape that can be heard around them, and are more interesting because they are self-referential. For example, on one recording a helicopter can be heard passing overhead as a passer-by is asked if he/she is listening to any particular sounds at that point. He/she of course answered that he/she was listening to the helicopter, which is proof that such an exercise concentrates the listening abilities of those approached.

Many of the students seemed slightly disappointed that the questions they asked received only the briefest of answers. I explained that the point of the exercise was to raise awareness, and that the people they approached might go back to work, or wherever they had come from, and tell others about the experience they had had. It is certainly something one might recount to colleagues: being accosted in the street during one's coffee break by a group of fifteen-year-olds armed with microphones and recording equipment, and asking strange questions about the sound environment!



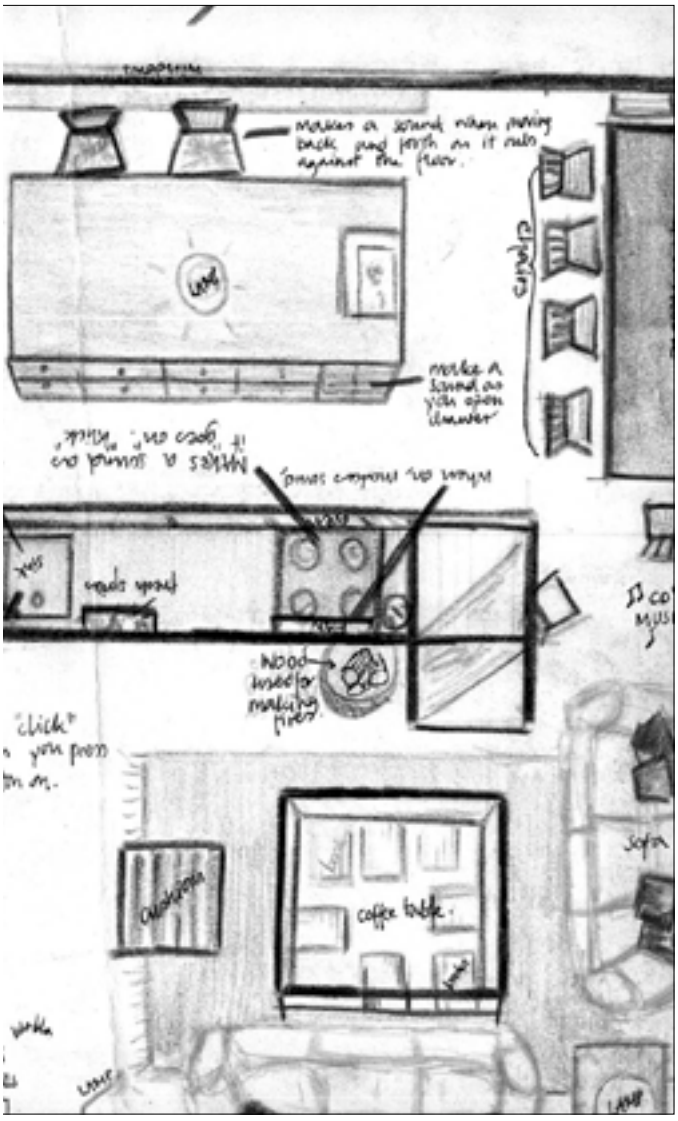
Sound Map 2: by Fanny Magnusson, Autumn 2000

4. Conclusion: Where Next?

The preceding sections detailed some experimental work regarding the use of acoustic ecology strategies in a classroom setting, with assignments intended not only to raise awareness of important socio-acoustic matters, but also to foster creative interaction with the local soundscape. These experiences suggest a number of educational initiatives that could further develop the work presented here, and assist with the future propagation of acoustic ecology issues. In this final section I shall briefly discuss these initiatives and how they might facilitate the progress of the concerns of the present document.

There is a great need for more soundscape-oriented activity and awareness within the music education sector, both at primary and secondary levels, and also within higher education (including student music teachers) and extra-mural community contexts. A way of beginning to address this need is the setting up of a greater number of workshops (covering all the levels indicated above), to present approaches towards the exploration of the sound environment by music educators.

The term 'workshop' in this context is defined as the devising of situations where anyone may participate in acts of creativity regardless of his/her ability or experience. As stated earlier,



soundscape studies offer the ideal opportunity for so-called 'non-musicians' to explore sonic concepts. Many of my students may not consider themselves musicians, and therefore may not possess, at present, the necessary skills to analyse (according to traditional western harmonic/melodic procedures) pieces of (traditional western) music. However, their work on their Sound Journals convinced me that they were indeed capable of interfacing with the analysis of sound and its attributes (often at a quite complex and advanced level), because what was being evoked were natural responses—innate responses which we all share regardless of any over-simplified notions of musicality.

Since most practitioners and researchers regard soundscape studies as multi-disciplinary, educational soundscape workshops would create the possibility for experts from many fields (eg. acousticians, architects, sound engineers, social scientists etc.) to collaborate for pedagogically valid purposes, and make a greater contribution than they would at 'ordinary' experimental music workshops.

An extension of another point made previously is that interaction with the sound environment offers a way into the study of contemporary, experimental and electroacoustic musics, which are often considered 'difficult' to approach in an educational setting. The practice of soundscape studies encourages people to listen to all sounds, and the sound structures of natural (and man-made) environments are often more chaotic, strident and cacophonous than the works of many contemporary composers! Simply put, if you can encourage people to listen to *everything*, they can listen to *anything*.

The original project was devised not only as a means of presenting soundscape ideas to the students, but also as a way of approaching the expansion of possible sound sources encountered within contemporary, experimental and electroacoustic music. It is my intention that in the future such a project will also include students creating compositions or acoustic environmental models with the sounds they have recorded and the data they have assembled. I might add that just because the students did not compose and present their own sound pieces in the original project, this does not mean that it has nothing to do with music-making. Of course, it depends on one's definition of music, but what I am dealing with is "attitudes towards music-making", and sensitivity towards sounds, whether traditionally considered musical or not. Attributes such as these could be seen to be highly important for the developing contemporary musician. It is just a question of how uni-dimensional a definition of music we want to contend ourselves with.

Electroacoustic music at the turn of the 21st century (in an age where electronic music is almost as commonplace as concrete or plastic) is a useful approach to the soundscape. Using computers and recording technology we are able, not just to listen and appraise the sounds around us, but also to sculpt with this sonic material. With electroacoustic means at our disposal, our creative responses to the soundscape almost come full circle, and once both the technology and pedagogical strategies become more widespread, our young people will not only have the opportunity to become soundscape researchers, but also soundscape designers.

Note: The project itself was presented at ten schools across Sweden this autumn by a group called AMMOT (Artists and Musicians Against Tinnitus), and although the focus was shifted slightly, the original exercises were used. We are planning a publication (in Swedish) which will be part project documentation, part handbook. At some point in the future I am planning a version of the project that will possibly take place in England and culminate in the participants creating compositions or virtual sound environment models with the sounds they have recorded.

Robin McGinley is a British composer, performer and music educator currently living and working in Stockholm, Sweden. He specializes in new and experimental approaches to sound and performance, and his compositions include aspects of electroacoustics, live electronics, text-sound poetry, graphic notations, and sound and video installations. He has undertaken a number of collaborations involving dance and theatre.

This inclusive approach actively informs his work as an educator that encourages schools and community groups to realize some of their potential as composers and performers, and introduces new ways of thinking about the music of sounds.

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References

Martin, J. "An Interview with Trevor Wishart" in Stollery, P. (ed.) *SAN Journal of Electro-Acoustic Music No. 13'* (2000) Sonic Arts Network, pp. 31-35.

Schafer, R. Murray. *The Tuning of the World* (1977), Appendix 1 Sample Sound Notation Systems, Alfred A. Knopf, pp. 264-267.