

Soundscape in the Arts

NoTAM, Symposium April 8 – 10, 2010

Some thoughts on soundscape composition.

This article is a summary of my talk given at the symposium «Soundscape in the Arts», organized by the Norwegian center for technology in music and the arts (NoTAM) and the Norwegian Academy of Music, April 8 – 10, 2010 in Oslo, Norway.

I address the subject “soundscape composition” by giving a presentation of the background and principles underlying three of my works: *Mårådalen Walk* (1993), *Mountain Listening* (1997) and *Burraborangian Stones* (2003). This way I will show how my approach and thinking about composing a soundscape work is similar to composing a piece for musical instruments.

These works are the results of land art workshops, which were held outdoors in remote areas. All three works consist of recordings made during the workshops. *Mårådalen Walk* is the sound of me walking, *Mountain Listening* are recordings of people listening, *Burraborangian Stones* are recordings of the Burraborang landscape with the subtle addition of the soft clicking of stones. In these three gatherings, I was the only sound artist amongst other visual artists.

• *Mårådalen Walk, Present Symposium*

The art/nature symposium, “Present”, took place in the mountain valley of Mårådalen in Skjåk, Norway, August 16 – 27, 1993. It was arranged by the International Centre for Art in Nature, KIN, Norway. “Present” was the first art/nature symposium in which I was invited to participate.

There were 14 artists from 5 countries participating in the symposium. We lived together and worked in the mountains for 11 days, from August 16 – 27, 1993. Our campsite was located in the centre of the valley, a 2-hour walk from the opening of the valley, and a 2-hour walk to the bottom of the valley where the glaciers take over.

The valley of Mårådalen is located 1.100 – 1.200 m above sea level. The vegetation is low grass, flowers and some underbrush. High mountains, covered with ice and snow, surround the valley. A river originating in the glaciers runs through the valley and creates several small lakes.

Some of the visual artists made geometrical forms in the snow; others placed materials like silk and metal wire into the stone landscape. I walked: on stones by the water, in the delta below the glacier, in the moraine, along the lake and up an engraved straight line in the snow.

The result of my work during “Present” was the CD *Mårådalen Walk*.



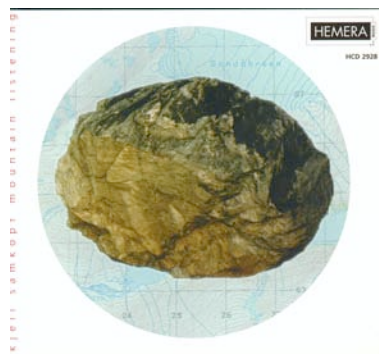
- **Mountain Listening, Overgang / Transition**

The symposium “Overgang / Transition” took place in the area in and around The Jostedalsgreen National Park, Norway, August 11 – 24, 1997. It was also arranged by the International Centre for Art in Nature, KIN, Norway.

11 artists from 6 countries, together with an art historian, an anthropologist and a video team, hiked through the mountains along the more than 200 year old path from Skjåk to Stryn. This trail, whose highest point is Kamperhamrane Mountains (1300 meters above sea level), used to be the main connection between Eastern and Western Norway.

We lived together, walked and worked in the mountains for 14 days. Some of the visual artists took photos; other placed different materials into the landscape. I recorded people listening.

The result of my work during the symposium “Overgang / Transition” was the CD *Mountain Listening*.



- **Burraborangian Stones, Burraborang International Artists Workshop**

The Burraborang International Artists’ Workshop (BIAW) consisted of 23 artists who worked and lived together in the Burraborang Valley, regional News South Wales, Australia, in the period of April 12 - 27, 2003. The group of artists

included Indigenous and Australian artists, artists from Sri Lanka, Malaysia, Pakistan, Vietnam, New Zealand, Japan, Thailand, USA, Finland and Norway.

Some artists made installations and art works in nature, while others did performances. I recorded the Burraborang landscape with the subtle addition of the soft clicking of stones. The recordings reflect the natural changes in the soundscape made during the day and night in various weather conditions of wind, sun and rain. Pure nature sounds interact continuously with elements of culture; passing airplanes, distant motor bikes and the soft voices of the BIAW participants, all counting in their own native languages.

The result of my work from this workshop is the CD «Burraborangian Stones», which will be released on the Norwegian record label MERE Records during the fall of 2010.

Some words about my background and my way of thinking about playing and composing

I am trained as a classical percussionist and a composer.

As a percussionist I have played in various settings; a timpanist in The Trondheim Symphony Orchestra, a percussionist in The Oslo Philharmonic Orchestra and The Norwegian Opera Orchestra. I was also a soloist in my own works for solo percussion and electronics for many years.

The focus on sound itself is characteristic for percussionists, as percussion is not an instrument, but an idea about sound. With this I mean that the focus is not on the instrument or sound object itself, but on it's sounding properties. You often hear during rehearsals that the conductor in a symphony orchestra addresses the percussionist asking: «do you have a larger tam-tam with a darker sound? The one you have there has a too high pitch» or «do you have a smaller wood block, one that is higher in pitch?» or similar questions. You never hear the conductor ask the first violin player the same question: «excuse me, do you have another violin, one with a brighter sound?». The percussionist will always try to find the right sound, or group of sounds, for every single musical context. The instruments themselves are not so important, no matter how nice they might be.

I have been teaching percussion for several years. The basic idea in instrumental technique is the following: Sound is movement, objects that move makes sound, objects that do not move, don't. This is true for all objects, whether it is a drumhead, a violin string, a column of air or a teacup.

Instrumental technique can be summed up in these five points:

1. Sound is movement.
2. An object that moves, make sound.
3. The sound an object makes is the result of how it moves.
4. How it moves is a result of how it is put into motion.
5. How it is put into motion is a result of how you move.

In other words, the sound you get from your instrument is a result of how you move. If you want to change the sound (without manipulating the instrument), you have to change the way you move. The better control you have of your movements, the better control you have over the sound you produce.

A red thread in my work as a composer has been a development towards sound. From composing for traditional instruments, I have gradually augmented my sound palette to include electro-acoustics and an increasing number of untraditional sound-making objects. The next step in this development was the sonographic CDs already mentioned: *Mårådalen Walk* (1994) and *Mountain Listening* (1998). In 2002, I released the CD *Music for Large Mountain and Vibraphone* together with my dear friend the Dutch composer and sonographer Floris van Manen. Here the sounds of the mountain and the sounds of the vibraphone have equal importance in the final sound picture. The last step in this development is my current focus on the act of listening.

I studied composition at the Norwegian Academy of Music in Oslo with professor Finn Mortensen. During these years, a main focus was on «The Craft of Musical Composition» by Paul Hindemith, and on serialism. Hindemith's theoretical book «The Craft of Musical Composition» consists of exercises in two- and three-part counterpoint, and focus on the aspect of tension in melodic and chord intervals. Serialism is based on the idea of extremes or opposites, and about organizing events according to a predetermined set of rules.

Even if counterpoint in the style of Hindemith and serialism are no longer relevant compositional techniques, studying the principles of these techniques helped me to develop an understanding of the basic concepts, which, in some way or another, relate to all kinds of composition.

The following four points sums up my main tools for sound control and composing.

- The aspect of tension and release
- The idea of extremes or opposites
- The understanding of movement
- The use of numbers to determine one or more parameters of the work

The aspect of tension and release relates to the organic movement of alteration in our breathing. After breathing in, we want, and need, to breath out. This creates a wave motion, which may take an infinite number of forms. However, all these different forms are based on the same principle. The aspect of tension and release relates to the single event, and to the relationship between two or more events. I try to be aware of the overall tension level in every event (recording), if it has a static or dynamic character, if there is an increase or decrease of tension in the course of the event, if the tension pattern is erratic or even etc..

For a composer, it is necessary to know how to create and to release tension. Furthermore, to understand the laws he or she has to follow to achieve the intended result. A static audio event (a sine wave played back at a steady, dynamic level) will over time create an emotional tension in some listeners (i.e. if it is played long enough).

When we extend the aspect of tension and release into the extreme, we end up with the concept of opposites. Tension and release is a natural and organic phenomenon. The idea of extremes or opposites is an intellectual construction. There are no opposites in nature, but we construct them in order to frame and to fix the limits for our work. We use them in our attempt to make order in what seems to be a chaotic and unpredictable world.

There is a story about the Swiss painter Paul Klee, when he as a young student practiced his drawing skills. For weeks, he made drawings with black ink on a white paper. One day he switched (to the opposite), and began to draw with white ink on a black paper. His action of drawing was the same, but the result and the experience was complete different. Black and white are considered opposites, but there is a significant difference between black and white, and white and black.

We all know that before we make a recording, we have to adjust the recording level to the loudest and softest sound (the dynamic extremes). But there are numerous other pairs of extremes and opposites that we have to take into consideration when we do our recordings with the purpose to make a soundscape composition, all dependent on what we are recording, and where and when and why.

All I hear is the result of something moving. The sounds I am hearing are a result of what is moving, where it moves and how. If I want the sounds to be different, I have to change, either what is moving, where it moves or how it moves. In order to get the string section in a symphony orchestra to sound homogenous, we synchronize the bow strokes, i.e. we ensure that all the players in the violin group move exactly the same way.

Changing the "sound making objects" are sometimes impossible; for instance when you are recording a crowd of football supporters during a home game, or the waves on a windy day. In those cases, if I want to hear something differently, I have to move. I can move in space, i.e. go to another spot, or I can move in time, i.e. wait ten minutes, or come back after dinner.

The recordings for "Music for Large Mountain and Vibraphone", a project that I did together with Floris van Manen, were made back in 2002. A project about experiencing the change of perception of time and space when staying longer than just a couple of days out in nature. In one of the sessions, we wanted a blend of the sound of a river and the sound of the vibraphone. I wanted the river to be in the foreground, so the microphones were placed close to the river. The

vibraphone was placed on the opposite riverbank. It turned out that the sound of the vibraphone was too dominating, so we moved the vibraphone further away. It was still too loud. We ended carrying it 800 meters up the hillside, before we had the correct balance. The recording was done with the microphones placed over 1000 meters away from the instrument.

Since the beginning of 1980, I have used series of numbers in my works. With the use of conversion tables used in numerology, I have translated names, words and dates into numbers. I have used these resulting rows of numbers to determine various parameters in my works. These numbers are not to be detected or recognized by listening. Yet, they give the work a form and a consistency, and help to establish an inner logic that I like.

John Cage used the Chinese *Book of Changes, I Ching*, to free himself from his memory, taste, likes and dislikes. I use rows of numbers in a similar way. They give me a pattern and a set of rules I have, or chose, to stick to. Furthermore, the numbers give me answers and solutions to many questions.

In *Mårådalen Walk* the word, "Nature", determined the length of the piece and the length of the sections. The length, pitch and placement of the manipulated background sounds are also determined by the same row of numbers derived from the word "Nature".

What is the difference between composing for a standard instrumental ensemble and making a soundscape composition? There are of course the obvious differences. A score is a set of written instructions, intended to be interpreted by one, or a group of musicians, on how to produce sounds (which – when – how - where). A recording is dealing with the sounds themselves. Technically these are two quite different ways of working. On the level of idea, however, the similarities are more obvious than the differences.

I still consider the basic aspect of tension and release, in this case in the single recording, between the various recordings, and in the work as a whole. I start my composing by making a list of the site's possibilities, and sort them into categories. I use the concept of extremes and opposites, look for the closest and furthest, smallest and biggest, and fix the mental limits of my workspace. I think of the landscape as an "instrument" to play on. I use my understanding of movement, and try to find out what is moving, how and when. I also see how I have to move if I want a different balance or perspective in my recordings.

Using rows of numbers helps me in the initial stages to come up with numerous ideas of how to organize and group the details and the whole. And I always force myself to hurry very slowly through the entire work process.

Sonology and Sonography

In 1978 – 79, I studied at the Institute for Sonology in Utrecht, the Netherlands. My main study was on sound analysis, sound description and sound synthesis. This was also my first introduction in using computers for the organization and production of sound.

Here I met Floris van Manen, whom I have collaborated with since. In the following years, he taught me all I know about recording, besides serving as a “vivifying factor” in my development as a sonographer.

Floris van Manen was the first to introduce the term ‘sonography’, describing field recordings. I like that term, since the way we do field recordings has many similarities with photography.

I especially remember one incident from my year at the Institute. A colleague student was working on a computer synthesis of the sound of a woodblock. One day he asked me, being a percussionist, what I thought about his result so far. I answered that I found it not particularly good. He was very surprised, and in his attempt to convince me that his synthesized woodblock actually was very close to the sound of the original one, he played back the recording of the woodblock he had first analyzed and then carefully synthesized. I realized that he had chosen a recording of a quite bad woodblock as the basis for his work, obviously one with a big crack in it. However, on the other hand, he had succeeded quite well to digitally synthesize the sound of a broken woodblock.

This led me to the understanding of the difference between a good recording of a bad woodblock, and a bad recording of a good woodblock. And further, of the influence on my listening of the imaginary sound of the ideal woodblock, or the ideal recording of the ideal woodblock. We try hard to hear what we want to, or expect to, hear.

The essential question is again intention. What is it you want to tell? What kind of sounds are the best to tell your story?

Some words about landscapes

Composing means assembling a number of elements into a compiled whole. When this applies to landscapes, there are many ways of doing this.

• The Düsseldorf School of painting

The Düsseldorf School of painting refers to a group of painters who taught or studied at the Düsseldorf Academy in the 1830s and 1840s. The work of the Düsseldorf School is characterized by finely detailed yet still fanciful landscapes, often with religious or allegorical stories set in the landscapes. Leading members of the Düsseldorf School advocated “en plein air” paintings (painting outdoor), and tended to use a palette with relatively subdued and even colors. The Düsseldorf School grew out of and was a part of the German Romantic

movement. "Landschaftlichen Componierverein" (Society of Landscape Composers) was founded in 1827.

It taught landscape painting based on a close study of nature. All kinds of details from nature, from the most insignificant pieces of bark to moss-covered stones or tree stumps were carefully recorded by drawing or painting. In the studio, these fragmentary notes were combined to form complete landscapes, the aim being to create an 'ideal' landscape of maximum beauty. An ideal Düsseldorf landscape might even be put together using elements gathered from several countries. A clear focus on light, mostly in still lifes and genre scenes, is typical for the Düsseldorf School of painting; the great love for the detail in landscape paintings and the composition's spatial differentiation are other characteristic features.

- **Vincent van Gogh**

Many years ago, I visited the van Gogh Museum in Amsterdam. After studying the paintings, I felt strongly that Vincent van Gogh was not a composer; in the meaning, that he did not "compose" his paintings. I felt he just painted his motifs as they appeared to him. The composing was in the choice of motif and perspective. Vincent van Gogh was inspired by Japanese woodcuts, and he tended to apply a perspective of non-symmetry, placing his motifs off center.

This gives two basic approaches:

1. Compose an ideal landscape.
2. Leave the landscape as it is.

To compose an ideal landscape can be done in many ways. We can actively avoid certain sounds during our recordings, i.e. scare away noisy dogs or sheep (or assistants), or stop recording whenever an unwanted sound appears, i.e. a passing plane or a distant motorbike etc. We can also remove or add sounds later in the studio. We can copy the Düsseldorf painters, by putting together sounds from several countries, or continents, to create an imaginary landscape.

If your approach is to leave the landscape as it is, the composing is in the choice of perspective and the timing. You take on the Cage attitude: «I welcome whatever happens next» and accept the landscape as it appears in this moment, and "play" with it, not despite it. This is usually a real exciting experience.

My approach is towards the second. There is of course a limit to this. I was asked during my talk if there were any sounds I would not allow in my recordings. I answered not what I could think of. However, there is not one single sound I would not allow, but the reoccurrences of a specific sound would force me to make a decision. When an "unwanted" sound (the mobile of a colleague) starts to be the main thing in the recording, I would have to stop. If the initial sound qualities I have chosen for my recording are no longer to be heard, there is no need to continue recording. On the other hand, unexpected sounds may add richness to a recording.

Technology

• Recording

I try to reduce my recording equipment as much as possible. I use two omnidirectional microphones with a Jecklin disk, and a portable phantom power preamplifier. As a recording device, I have so far used a DAT recorder. This is all.

I need to carry everything with me in my backpack (together with my sleeping bag, tent, clothes, food etc.), and I have no possibilities of getting additional supplies in the course of the workshops. So the equipment needs to be small, light weight, and have low battery consumption. It also has to be reliable in extreme weather conditions as temperature and humidity.

My choice of recording equipment is reflected in my choice of the format of the final work.

• The final work

The final work is a stereo CD. The CD is not merely a documentation of the work; the CD is the artwork.

I like the CD format. It has similarities with a book. It is cheap, affordable to everyone. You don't need expensive equipment to listen to the work; all you need is a CD-player, a pair of headphones and a comfortable chair. You don't need to go to a special place at a special time; you can listen to the work when you want, in the comfort of your own home. All you need is to pay attention and focus your listening over a period of 60 to 80 minutes.

I prefer, and advice people, to listen to the CD using headphones. Listening with headphones is a quite clinical experience, but I prefer this instead of adding the acoustics of the playback room to the recording, which is the case when using loudspeakers.

I also like the CD cover. The CD cover gives the listener something to hold on to. With no CD cover, most people find other objects to look at or fiddle with while listening. I believe that the CD cover gives me a possibility to reduce visual distractions. Therefore, I want to keep it simple, just a short text with the most necessary information.

Some words about my approach to soundscape composition

This kind of work consists of three parts: preparation, site composing and studio composing.

• Preparation

The preparation usually takes some months. I prepare in the same as a musician. I practice on my "instrument", and I improve my skills with a specific task in mind. In this context, it means getting acquainted with my equipment, putting it

together, packing it, making recordings of different kinds, in different weather conditions and at different times of the day (for instance in darkness). But most important: I practice my listening skill. Our awareness is like a muscle; it has to be trained to be able to perform well, when we need it, and over an extended period of time.

First of all my listening preparations consist of increasing my awareness on the everyday sounds around me.

Another good exercise is to listen with microphones and headset (without recording) and alternate this by listening with your ears only (i.e. without headset). I suggest periods of at least ten to twenty minutes, with and without headset. Our ears need time to adjust to different listening situations, in much the same way as our eyes do when we move from a bright, sunny environment into a dark cellar. It takes time for our eyes to adjust to the new level of light, so we can see properly.

I also spend much time listening to my recordings, multiple times, trying to change focus and the point of attention from one listening to the next, and also during the listening.

During the period of preparations, I also collect ideas of a possible new work. For these three projects mentioned here, however, I had no predetermined idea what I wanted to do. The ideas for the actual works came after three to four days at the site. I prefer to let the properties of the site provide the idea for the work, not me imposing my preconceived ideas onto the landscape. I try to let the landscape “speak”, instead of forcing it to meet my needs.

- **Site composing**

I try to do as much as possible of the actual composing at the site, i.e. deciding which and what kind of recordings I will do, how and when. I try to become “one” with the landscape. This means to stay outdoors as much as possible, be aware of the constant changes, and always be prepared and ready, because things happen and change quickly.

The composing process is a constant moving back and forth between the work as a whole and the smallest details. I keep a detailed log of my thoughts and recordings. It is necessary to have a clear memory of all the recordings; how they were made, the adjustments made between different takes, variations in atmosphere, activity and tension level etc..

While recording I am both a listener and a part of the landscape that I am recording. I don't try to hide, pretending I am not there. A sonographer is making choices for me as a listener, choosing what I will listen to and how. Therefore, I prefer to let him/her be audible in the final sound picture.

The person making the recording is first of all a listener, and he needs to perform controlled actions in order to do his work. He needs to breathe, he needs from time to time to change position, and his clothes will make sounds when he walks, moving the microphones through the landscape.

• Studio composing

Back in the studio the main work is again listening. After hours of listening through the complete material a number of times, I start selecting the different takes, cutting out the desired sections, making transitions etc.. I always make changes in the studio, but I try to avoid post processing, i.e. no filtering, no coloring, only an overall adjustment of sound levels.

As mentioned earlier, I use the term “sonography” about these of works, due to the similarities to photography. A recording is, like a photo, a documentation of a place and a time.

A much-used form of presentation of photos is the use of series: a number of photos, all having the same size and same framing, showing the same or related motifs. In *Mårådalen Walk* and *Mountain Listening*, I used the same technique by having five sections of equal length, showing different aspects of the same idea, in these cases walking and listening. By listening to them all, they supplement each other, resulting in a more profound experience.

A last aspect to consider is the fact that some sounds will capture your attention more than other sounds. Some sounds will enhance your attention, i.e. make you more aware. Other sounds will distract your attention, i.e. make it more difficult to keep your focus. The only way to detect the actual effect of the different sounds over time is by repeated listening, and having a number of trustworthy colleagues listen to and honestly comment on your work as you approach your final mix.

Some concluding words about listening

To me listening is a skill I can develop and improve. I want my listening to be a conscious action I can control, not merely an automatic reaction to sound impulses.

Some years ago I surprisingly discovered that, through my whole life, whenever listening to music, I had never listened to the words of songs. I grew up listening to The Beatles, The Rolling Stones and even Bob Dylan, but I never paid any attention to the text. I find this very interesting. My attention has, for some reason, always been attracted to other aspects of the music. Today I expand my listening skills by consciously forcing myself to listen to the lyrics.

I expect that if this is true for me, it must be true for other people as well. Some parts of the total sound picture are ignored in favor of others. I believe that most people over the years have developed a habitual way of listening of which they are not aware. Our attention is mechanically drawn to something, while other parts pass without notice. There is nothing wrong with this as such. However, I believe that if we do not try consciously to change this, our listening will never be as rich as it could and should be. An effort is needed to listen beyond ones routine.

Listening to the sounds of nature is a good means to develop a more attentive and active way of listening. My experience is that nature sounds has the property to balance the human emotional and intellectual centers better than music alone.

Paul Klee once said that, for the understanding of a painting, you need a chair. The same goes for listening; it takes time.

Conclusion

Talking, writing and reading about listening can inspire us to want to improve our skills. However, the only way to really become a better listener is to listen consciously and attentively with an open awareness as often as possible.

To some people the conceptual aspect seems more important than the sound and listening itself. For me, however, soundscape works are about the act of listening. Of course, your everyday surroundings provide you with more than enough material to listen to. But an artwork can be an opening onto another level of awareness, being a condensed experience carefully designed by an artist.