Soundscape studies: the Early Days and the Future

By R. Murray Schafer

Schafer will listen back nearly 50 years to the days when the subject of the soundscape was being first introduced in the Communications Department at Simon Fraser University in Vancouver, Canada. He will discuss the difficulties in finding acceptance for a new subject with new terminology, but also the excitement in discovering how rich the world is in sounds and how it might evolve as we participate in its evolution. Everyone with ears is a performer and a listener in the continuous symphony that surrounds us. Will it be beautiful or ugly?

Let's find out.

In 1965 I was invited to join the faculty at Simon Fraser University in Vancouver. The university was just about to open and our department was to be called "Centre for Studies in Communication and the Arts." I think the title was influenced by Marshall McLuhan who had written extensively about the relationship between print, and cross-cultural sound communication. When the university opened, our department consisted of a social psychologist, a mechanical engineer, a theatre director and myself — a musician. The expectation was that we would bring the arts and sciences closer together, but the plan never succeeded. The result was that by the third year we had developed independent programs, some of which were successful while others floundered. I had managed to establish a very good electronic music studio; but as we had no music department there were only a few students interested in it and nothing much of significance was produced. It would be several years before we were to develop the program in soundscape research that has since been recognized internationally.

Vancouver is a very enjoyable place to live. The climate is moderate — without the freezing winters of Winnipeg, Toronto, or Montreal. The snow remains on the mountain peaks where it can be appreciated without having to be shoveled or driven through. But before too long one thing began to bother me. As the climate in Vancouver is quite warm in winter there is no need for storm windows (i.e. double glazing) as in other parts of the country, and there is substantially less insulation in the walls of buildings. This meant that traffic and other external noise could be heard inside buildings much more clearly than in buildings in colder environments.

I joined an anti-noise organization, but I didn't stay with them very long because the few people who gathered each week to complain had no idea of how to increase our membership or bring our complaints to the attention of the authorities.

The period I am speaking of (1965–1975) was probably the noisiest decade in the Western World. Reconstruction in Europe after the Second World War (1939–1945) was matched in Canada as cities were expanded to accommodate floods of refugees. Noise was indisputable. Noise was progress.

Jet air travel was rapidly expanding and jets produced substantially more noise than turboprop planes. The Concord jet, the first sonic boom-producing passenger plane, was flying across the Atlantic from Paris to New York and would soon be flying to inland destinations leaving its sound print all across the country.

The automobile industry was busy producing what they called "muscle cars," with more powerful engines and substantially more noise.

The parallel in the entertainment industry was the invention of Rock Music, producing higher levels of amplification than music had ever achieved before.

I tried again to bring some attention to these unpleasant facts about sound by introducing a course in Noise Pollution at SFU. A few students enrolled but most of them dropped out when they realized they weren't going to hear their favorite rock bands. It was then that I had an inspiration. We would study all sounds, not merely those that were unpleasant or dangerous. Each student was to keep a sound diary. What were the sounds you liked? Or disliked? What was the first sound that woke you up this morning, or the last sound you heard before you fell to sleep last night? What was the most beautiful sound you heard today? Or the ugliest? I asked the students to copy out any interesting references to sounds in the novels they might be reading for other courses, and we would discuss how different the soundscapes of the past are from those of the present, or how they vary in different countries and cultures.

> I pointed out how all sounds of the present will soon become sounds of the past and asked whether there should be museums for disappearing sounds? Actually I was beginning to assemble a reference library of significant sounds found in descriptions from other places and times.[1]

At this point the word "soundscape" didn't really exist, or at least was unknown to almost everyone. I had derived it from the word "landscape," which was equally unknown until Petrarch, the fourteenth century Italian poet and scholar decided one day to walk to the top of a mountain in order to see the view. What he saw was something that had never been seen before and therefore had to be described by a new word: Landscape. When I first introduced the word "soundscape" to describe what we were listening to every day, there was a slight commotion among the academics and acousticians, one of whom asked whether "smell-scape" would be the next subject to be investigated.

If you don't have a word to describe something it doesn't exist; and so new words have to be constantly invented. But in the early days the acousticians thought that the word "soundscape" was quite unnecessary. Sound could be described quite adequately by phons, decibels, and other technical terms that the general public would find incomprehensible.

But sound terminology need not conflict. What the term soundscape has given us is an opportunity to study sounds past and present, useful and useless, beautiful and ugly, exciting and boring — in short it unites the practical and aesthetic aspects of

sound allowing us to study and describe the acoustic environment through which we move every day of our lives. Some people may be shocked that we are talking about designing the whole acoustic environment; but I would like to point out that urban environments are already designed to accommodate cars, trucks, horns, whistles, sirens, planes — the noises produced by these machines have already been accepted as inevitable.

All we are asking is that we might bring a little more talent and imagination to the next round of talks about traffic and vehicle designs involving sound.

By 1975 the grant organizations were beginning to take our work in acoustic design more seriously. I was especially pleased to receive a large grant from the Donner Steel Foundation that allowed me to employ several young people. It was at that time that Hildegard Westerkamp and Barry Truax joined the team. The work we now wanted to undertake would take us to many parts of Canada and ultimately to Europe.

We began to make recordings of unique sounds that were to be heard only in certain times and places: a unique factory whistle, some ancient church bells, a noon whistle on a court house, anything, in fact, that helped to give a town or city a unique character. We called these *soundmarks* because like "landmarks" they help to distinguish the places where they are heard. I might mention that we have been contacted on more than one occasion by people wishing to recover the soundmarks of their town or village that had at some point been discontinued.

After we had produced a few short radio programs we were approached by the CBC with a proposal to produce a series of ten one-hour radio programs entitled "Soundscapes of Canada." Some of these turned out to be quite unique. In one of them entitled "Directions" two members of the soundscape team travelled by car across Canada, from Halifax to Vancouver, and each time they needed information on how to get to their next location the answers they received were recorded so that the program consisted of an hour of "directions" in all dialects and languages across the country.

Another program introduced "soundmarks" — significant sounds like noon whistles, chimes and bells — that gave a distinctive acoustic character to various towns and cities. It is surprising how many of these sounds will never be heard again, except on our recordings.

In 1975 the World Soundscape Project attempted to live up to its name by undertaking a visit to five small villages in five countries in Europe: Sweden, Germany, Italy, France, and Scotland. Each of these villages was driven by one industry alone. The reason these particular villages were chosen for study was because they were close to the cities I was to visit on a lecture tour. I took three assistants, Bruce Davis, Peter Huss, and Howard Broomfield with me, and we set out on our travels. Our study of the five villages revealed sound-patterns that were unique to each village and the way these sound-patterns dictated the social life of the village.

As it turned out we were to play an important role in preserving one of the villages. This was Lesconil, a French fishing village in Brittany. While we were there it was announced that a new super highway was to pass close to the village. The fishermen pointed out that the noise of the highway would frighten the fish and kill the fishing industry. We endorsed their fear and the subject attracted the attention of the Paris press. It also led to a very beautiful radio program entitled "Questionnaire pour L'Esconil."[2] That was one of the very few times we have been successful in speaking out to protect the environment.

This is how the World Forum for Acoustic Ecology should function. We should always keep in mind what *acoustic ecology* means. It means speaking out against destructive and unnecessary noise. It means saving our ears and those of others who might not realize that sound can be dangerous.

I don't think anything like *Five Village Soundscapes* had ever been done before our study. It made clear that each village possessed a unique acoustic environment and that sudden changes to these patterns can impair or destroy the social life of the village.

Our work was endorsed and expanded when a Finnish group of researchers revisited all five villages twenty-five years after our investigation. This made it possible not only to compare the sounds heard in 1975 with those heard in 2000, but it also revealed changing attitudes to the sounds heard over a quarter of a century.[3]

And now may I ask the big question? Will there be more studies of the evolving soundscape in other parts of the world? Will the WFAE learn from what has been achieved and carry the work forward to assist in better acoustic planning for a healthier future? Can we expand our research and attract more interest in it world-wide?

Returning home to Vancouver we began to do a lot of field recording with the intention of building archives of quite common sounds that were in a state of change or were disappearing. I did not always share my colleagues' passion for recording in order to make radio programs, but there were times when we were able to use the microphone to gather some quite unique patterns of sound. On one occasion at Mission City, near Vancouver we did a twenty-four hour recording in a field near a monastery. Each hour was identified by the recordist on duty so that later we could follow the circadian rhythms. We also produced a one-hour radio program of our recordings so that listeners could easily follow the rhythms and marvel at the gradual changes.

We often recorded in what we might term a heuristic manner — that is, by setting up a system that would record without our presence — because, as everybody knows all creatures behave differently when they are interfered with or left alone.

The first extensive soundscape study we made of a Canadian city was that of Vancouver. It was to consist of a book and recordings. We went back as far as possible in our research, interviewing native people and early settlers. We read all the ancient historical documents that had anything to say about sounds. Early photographs of people, streets, and vehicles had to be carefully examined for potential sounds that could only be imagined. We asked the oldest people we could find to describe the soundscape in the days of their youth.

Vancouver is a relatively young city so it was possible to bring back much of its past. We were able to record many of the ancient soundmarks of the city: bells, horns, whistles that still existed and could be sounded.

An unpredicted development occurred when the German radio producer Klaus Schöning broadcast a sequence of horns and whistles we had recorded, giving the impression that it was a noise concert as used to be presented by Luigi Russolo and the Italian futurists. As a matter of fact the whistles on all Canadian trains are tuned to E-flat minor triad on 330 hertz suggesting harmony not dissonance. Factory whistles were often also tuned in the days of their popularity but today they have almost totally disappeared. People get to work on time by listening to the radio.

We asked people to copy out all references to sound in the novels they were reading, past or present. This gave us an enormous collection of sound descriptions, not only from Vancouver or Canada but from many exotic locations outside of Canada. And the important thing to remember is that the soundscape is always changing; and those changes can be for better or worse, depending on the actions and desires of the people living with them.

It was during the 1970s that the term *ecology* began to attract a lot of attention. I believe I was the first person to adapt the term to sound. In *The Tuning of the World*, I defined Acoustic Ecology as "the study of the effects of the acoustic environment or soundscape on the physical responses or behavioral characteristics of creatures living within it." In other words the soundscape is both positive and

negative. It can be birds chirping or a jet aircraft taking off. Ecology is not simply an effect; it is a relationship.

In this way we were able to assume that all sounds were innocent until proven guilty. We spent less time pointing our fingers at guilty sounds and began to concentrate on planning soundscapes for the future.

Is it possible to have a noise-free environment? Probably not. But it can be a quieter one and the soundscape *is* gradually becoming quieter. At least a great many of the dangerous sounds have been removed. Now we can think of carefully redesigning the soundscape by adding sounds that will harmonize with the environment and with each other. To accomplish that we need composers, musicians, psychologists, ecologists, acousticians, in fact anyone with open ears. What are we waiting for?

The long term biophonic technique of recording was later perfected by Bernie Kraus who made splendid recordings of nature in many different parts of the world.[4] The secret of phenomenological recording is not to interfere with the sounds around you. It is exactly the opposite of focused recording where one tries to eliminate interference from surrounding sounds. This is the aim of the interviewer or radio recorder. Bernie perfected phenomenological recording and all soundscape recorders can learn a lot from him.

As we go back in time we learn that there are no sounds in nature that can damage our hearing. God was a first-rate acoustical engineer. He put our ears on the sides of our head out of danger from our raised voices. In fact, our voices are calibrated so that when in normal use they can do no damage to listeners. But give me an amplifier and I can kill you.

Can we really improve the soundscape? Of course we can. We must go back and educate children and young people to listen more carefully. I have written some little books of acoustic games intended to get listeners to pay more attention to the soundscape around them.[5]

Hildegard Westerkamp and others have introduced sound walks to people in many countries. There are many kinds of soundwalks and they are easy to organize. The one I sometimes employ is to take a blindfolded group of people to an unknown environment. It need not be far away. Once there I get them to try to "visualize" the place we are in using only their ears. Is it an open space or closed? How far away are the walls? What kind of materials are around us? (You can discover this by tapping with a stone) And after we all have a mental image of the place we remove our blindfolds. What an amazing difference between what we heard and what we now see!

The word "soundscape" has become a very important word, not only because it defines the acoustic environment but also because it gave us a clear definition of what is being studied and why. It doesn't matter who discovered it. We all own it and rely on it frequently. It often seems out of place in urban environments. No matter; the same is true of landscape. Both are positive words, beautiful words. And we can make them more beautiful if we begin to tidy up some of the mess we've made of modern environments. Now we have a World Listening day (July 18) in which we can draw *everyone's* attention to the excitement and the beauty of the acoustic environment. Can we improve our ability to listen? Yes, we can. Can we improve the acoustic environment around us? Certainly we can.

Endnotes

1. Schafer, R.M. 1992. *A Sound Education: 100 Exercises in Listening and Sound-Making.* Indian River, Ontario, Canada: Arcana Edition; also, Schafer, R.M. 2005. *HearSing.* Indian River, Ontario, Canada: Arcana Editions.
2. Questionnaire pour l'Esconil was awarded the Prix Italia in 1980. Paranthoën, Y. 1980. *Questionnaire pour l'Esconil.* Radiotransmission, 23.03.1980.
3. Järviluoma, H. et al., eds. 2009, *Acoustic Environments in Change*. Finland, Tampere: TAMK University of Applied Sciences.
4. Kraus, B. 2012. *The Great Animal Orchestra.* New York, U.S.: Little Brown and Company.
5. Schafer, R.M. 1992. *A Sound Education: 100 Exercises in Listening and Sound-Making.* Indian River, Ontario, Canada: Arcana Editions; Schafer, R.M. 2005. *HearSing.* Indian River, Ontario, Canada: Arcana Editions.

About the Author

R. Murray Schafer has achieved an international reputation as a composer, an educator, environmentalist, scholar and visual artist. Born in Sarnia, Ontario, in 1933, he was raised in Toronto. As the 'father of acoustic ecology,' Schafer has been concerned about the damaging effects of noise on people, especially dwellers of the 'sonic sewers' of the city. Of the various publications Schafer released after his work with the World Soundscape Project, the most important is *The Tuning of the World* (1977) where he summarizes his soundscape research, philosophies, and theories.

Schafer's dramatic works employ music and theatre in a manner that he calls the 'theatre of confluence' (a kind of *Gesamtkunstwerk* reflecting his urge to explore the relationships between the arts). His diversity belies generalizations of style; his work could be described as a synthesis of 20th century avant-garde techniques with the 19th century romantic spirit.

He has received many awards such as the Canadian Music Council's first Composer of the Year award in 1977 and the first Jules Léger Prize for New Chamber Music in 1977. Recent awards include the Molson Prize, the Glenn Gould Prize, the 2010 Dora Award for his Soundstreams-commissioned opera *The Children's Crusade*, and the 2009 Governor General's Performing Arts Awards for Lifetime Artistic Achievement. Schafer holds honourary doctorates from universities in Canada, France and Argentina, and his own publishing house, Arcana, where his entire oeuvre may be investigated.

Happy Birthday to Murray Schafer,

founder of Acoustic Ecology

From the WFAE membership!