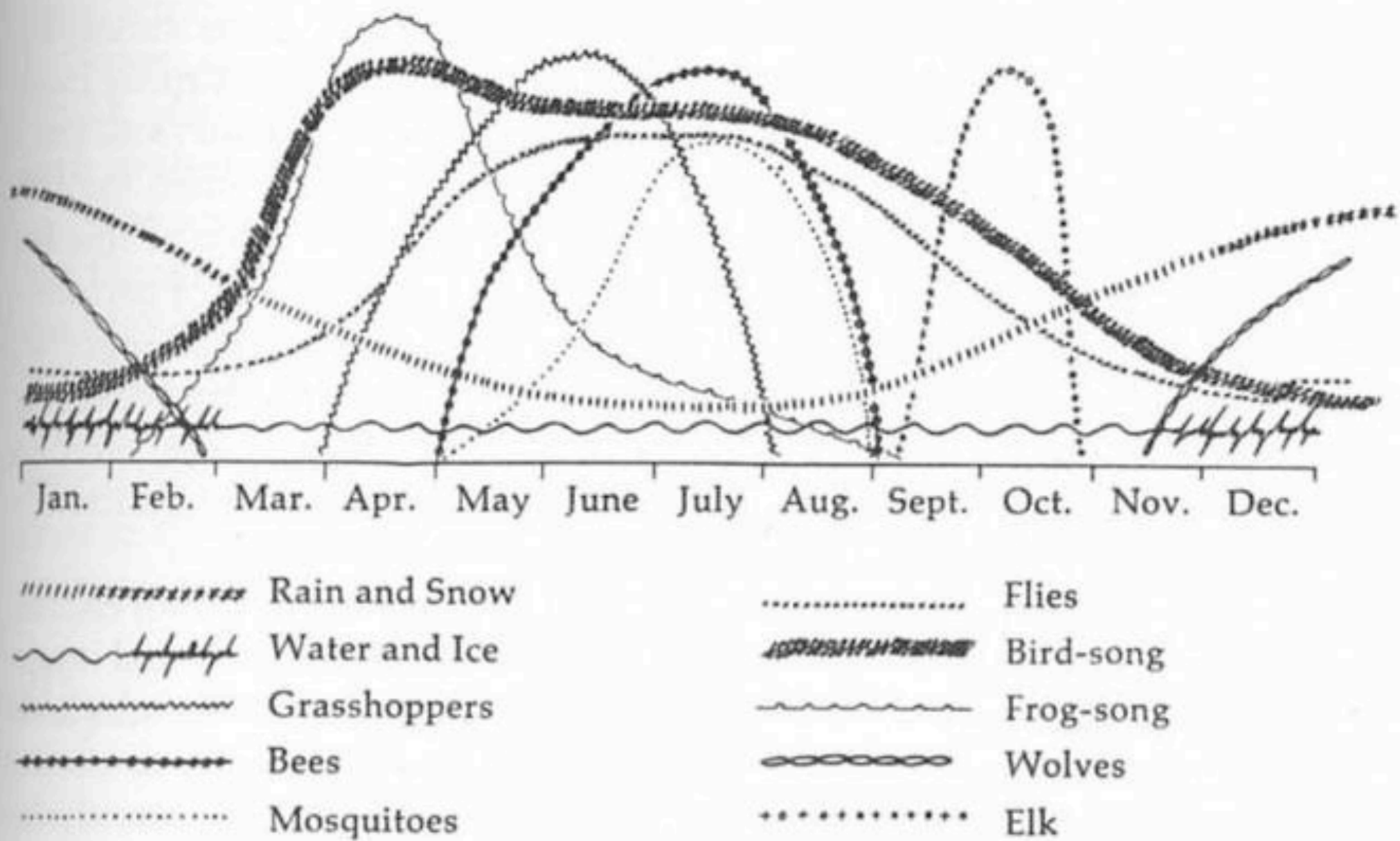


## soundscape composition

Soundscape composition is a form of electroacoustic music characterized by the presence of recognizable environmental sounds and contexts. Its purpose is to invoke the listener's associations, memories, and imagination related to the soundscape.

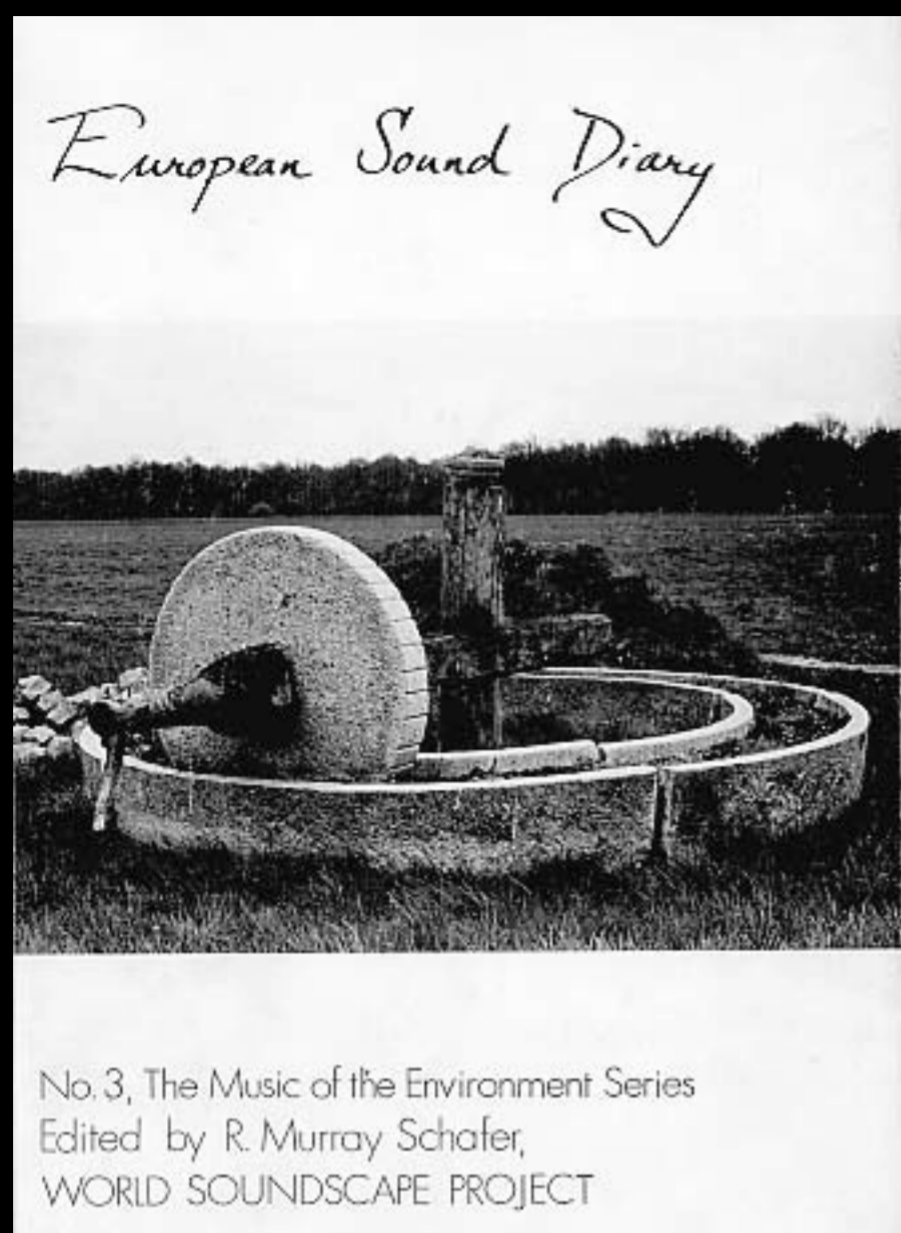
One major difference in the use of natural sound material in musique concrète, for instance, is the abstraction of the sound from its context (discussed in more detail later in this unit). The idea of the sound object relates to this notion. But soundscape composition relies upon a sound's context and origins. Barry Truax expounded on this idea:

In the soundscape composition . . . it is precisely the environmental context that is preserved, enhanced and exploited by the composer. The listener's past experience, associations, and patterns of soundscape perception are called upon by the composer and thereby integrated within the compositional strategy. Part of the composer's intent may also be to enhance the listener's awareness of environmental sound. (Truax, 1984)



*The cycles of the natural soundscape of the west coast of British Columbia showing the relative volume of sounds.*

In 1969, Canadian composer R. Murray Schafer suggested that the soundscape in which we live is a universal composition of which we are all composers. Schafer, who was teaching in the Department of Communications at SFU at the time, was already known for his unique perspective on sound and noise in composition. His suggestion that the sounds around us are a living composition was not intended as an alternative to music, but to raise awareness about the problems of noise. The concept led to the formation of the World Soundscape Project (WSP) at Simon Fraser University in the early 1970s. The WSP often got abbreviated to "the soundscape project," though Schafer clung to the idea of its global basis



In 1975, he conducted a tour through Europe to make recordings and study five villages in five different countries. The main purpose of this work was to document acoustic environments, both functional and dysfunctional. Recognizing that many soundscapes were disappearing, his project also became an aural history documentation. For example, in the small European towns, processes such as butter churning and hand lathing were vanishing, along with the unique sounds they produced. For Schafer, a functional soundscape was one in which noise did not predominate, in which all frequencies were present, and in which quiet sounds were not continuously masked by louder sounds. Another purpose of his work was to increase public awareness of the importance of the soundscape, particularly through individual listening sensitivity. In current terminology, the goal is to put acoustic ecology on the environmental agenda.



One of the WSP's first major publications was *The Vancouver Soundscape*, a booklet plus two records that appeared in 1973. Twenty years later, most of the recordings have been reissued on a double CD, where the second CD consists of documentary recordings and soundscape compositions derived from digital recordings made in Vancouver in the 1990s.

At SFU, people interested in the WSP ranged from composers of electroacoustic music, to those with more acoustic-based backgrounds (such as field recordists and sound artists), to those involved with acoustic design in a variety of contexts. Many of the participants, being composers, viewed the WSP recordings as found sound, as potential source material for electroacoustic compositions. And they began to apply electroacoustic techniques to processing the recorded sounds, creating compositions that ranged from those whose sounds are transparently manipulated to those that are much more transformed.

<http://www.sfu.ca/~truax/wsp.html>

To distinguish this latter approach from musique concrète and acousmatic music (discussed in Unit 12), it has been suggested that for a piece to be a soundscape composition, the original sounds must stay recognizable and that the listener's contextual and symbolic associations should be invoked. A thorough history of the World Soundscape Project can be found at <http://www.sfu.ca/~truax/wsp.html>.



Early soundscape composition involved minimal compositional technique, since it focused upon selection, transparent editing, and unobtrusive cross-fading. The composers considered what they were doing as framing the environmental sound by taking it out of context. It made it possible for listeners to focus on sounds with which they may have been familiar but may have ignored in day-to-day activity. Again, this idea underlies the WSP emphasis on acoustic ecology and stresses Schafer's ideas about ear-cleaning.

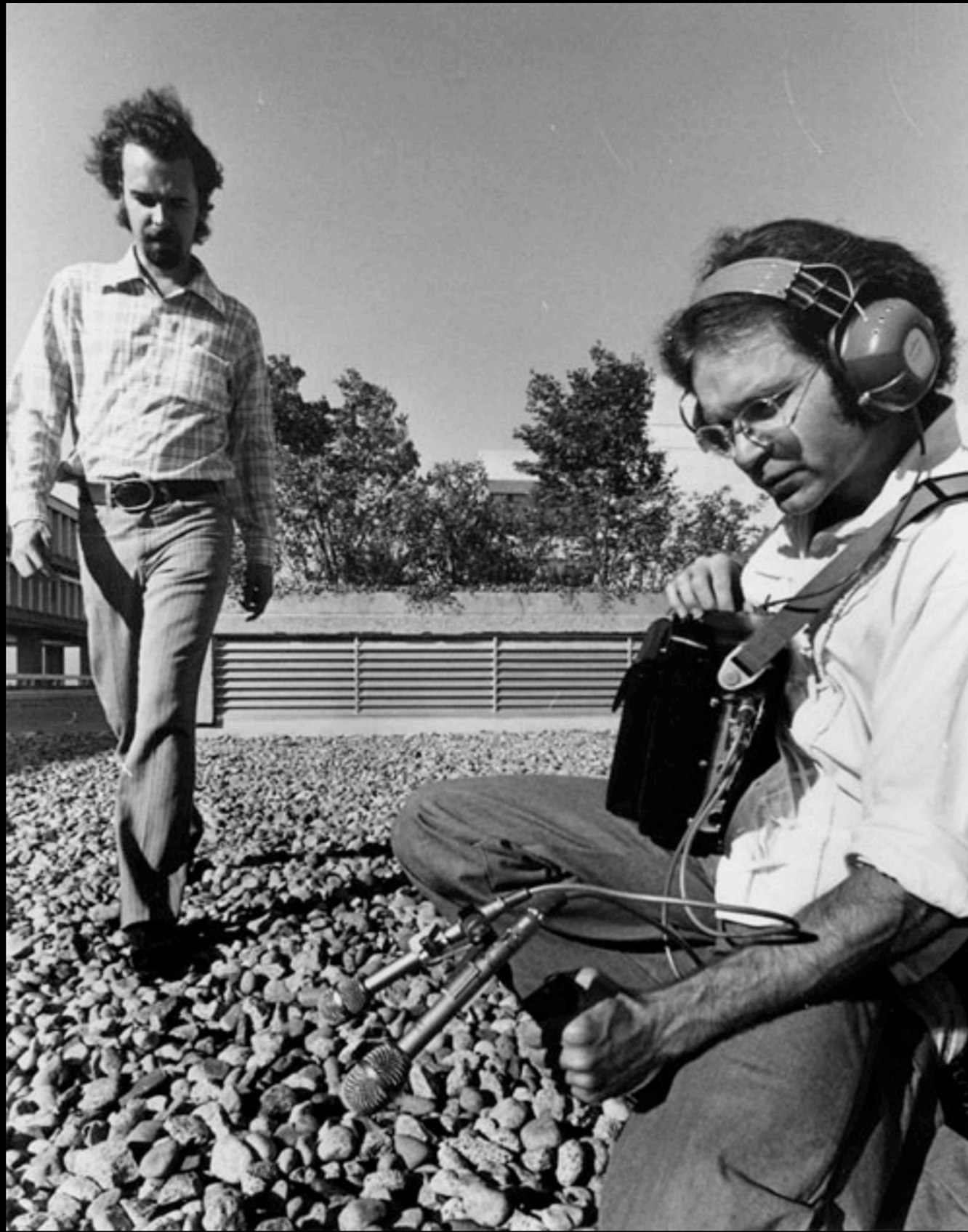
Reveal a deeper level of significance of sound, and, in doing so, invoke the listener's semantic associations without obliterating the sound's recognizability.

This neutral use of the material established one end of the continuum of soundscape compositions. In these works, the resulting sound is often long, unaltered excerpts from the natural soundscape and thus closest to the original environment. These might be considered found compositions, and they recall both John Cage's ideas about all sounds being available for musical purposes and Edgard Varèse's evaluation of music as "organized sound." The other end of the compositional continuum of soundscape composition uses any and all studio techniques to transform and process environmental sounds. These works are much closer to musique concrète, since the sounds are treated much more like extended sound objects; naturally, this method increases the level of abstraction. But in all soundscape composition, one concept is persistent: *Reveal a deeper level of significance of sound, and, in doing so, invoke the listener's semantic associations without obliterating the sound's recognizability.*



Luc Ferrari

The French composer Luc Ferrari was one predecessor of the WSP and its soundscape compositions. In 1970, he released a recording entitled *Presque Rien*, which means “almost nothing.” Ferrari referred to the works on the record as “poor man’s concrète music” because there was minimal editing and manipulation. The first of the set, “*Presque Rien No. 1*,” is based on a recording of a beach at dawn; Ferrari’s only manipulation was the compression of time using simple tape editing. The work was likened to “musical photography,” the assemblage of documentary recordings. Ferrari’s contemporaries in Paris—including the musique concrète composers of RTF—didn’t consider it music. Others contend that it is sound art rather than musical composition.



### The Vancouver Soundscape (1973)

One of the first results of Schafer's World Soundscape Project was a detailed investigation into the researcher's immediate surroundings, The Vancouver Soundscape. This study of Vancouver's acoustic environment included a two-record set of Vancouver's signals and soundmarks, natural and urban ambiences, and an illustrated talk by R. Murray Schafer on acoustic design.

The notion of sketching a city's acoustic image, using the natural and urban sounds found in that environment, has become an interesting medium for composers and artists worldwide. In fact, places like Madrid, Brasilia, Lisbon, Amsterdam, Tokyo, and Buenos Aires have all been featured.

"To record sounds is to put a frame around them. Just as a photograph frames a visual environment, which may be inspected at leisure and in detail, so a recording isolates an acoustic environment and makes it a repeatable event for study purposes. The recording of acoustic environments is not new, but it often takes considerable listening experience to begin to perceive their details accurately. A complex sensation may seem bland or boring if listened to carelessly." ( from: Schafer in the original record jacket)



### Homo Ludens (Man at Play), 1973

Opens with children's voices recorded on the playground of Seymour School in Vancouver's East End, near the CNR tracks

(0:24) Horn whistles, illustrating whistle tunings (first is E flat minor, root at 311 Hertz, a common tuning for Canadian trains and developed by Robert Swanson of the Airchime Manufacturing Company of Vancouver)

(1:07) Voices of adults, Vancouver Stock Exchange

(1:50) Friendly oldtimer singing on a Saturday night in Gastown

(2:59) Baseball game, Coquitlam's Mundy Park (ritualized character)

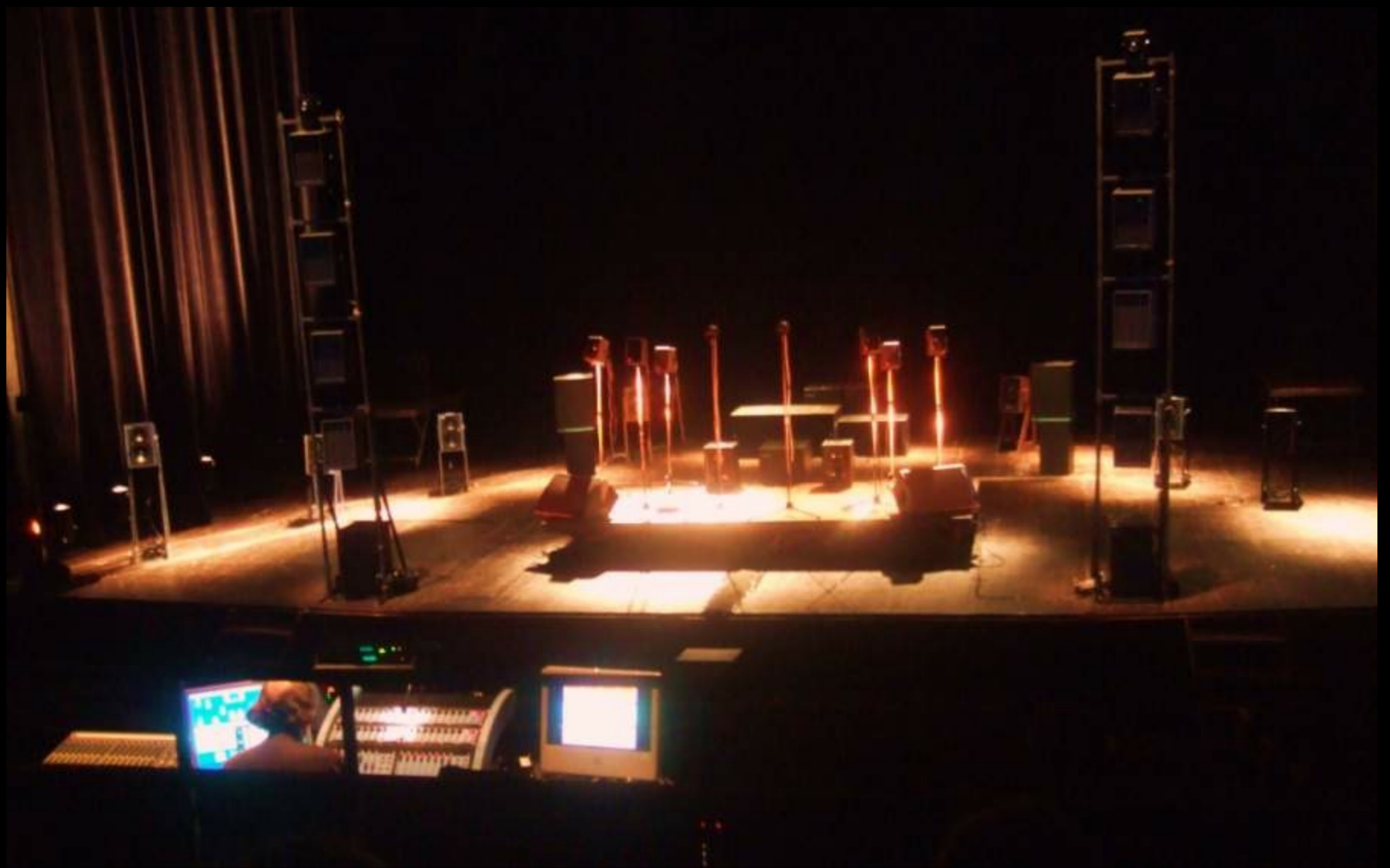
(4:06) Playground. . . .

This is one extreme of soundscape composition; the composer has limited himself to choosing only which soundscapes to present and when to change to another soundscape. But even with these limited decisions, the composer has a great impact upon the listener's experience. For example, this work ends with children at play, just as it began. Imagine if it instead ended with traffic noise. How would a listener's overall impression of the work change?

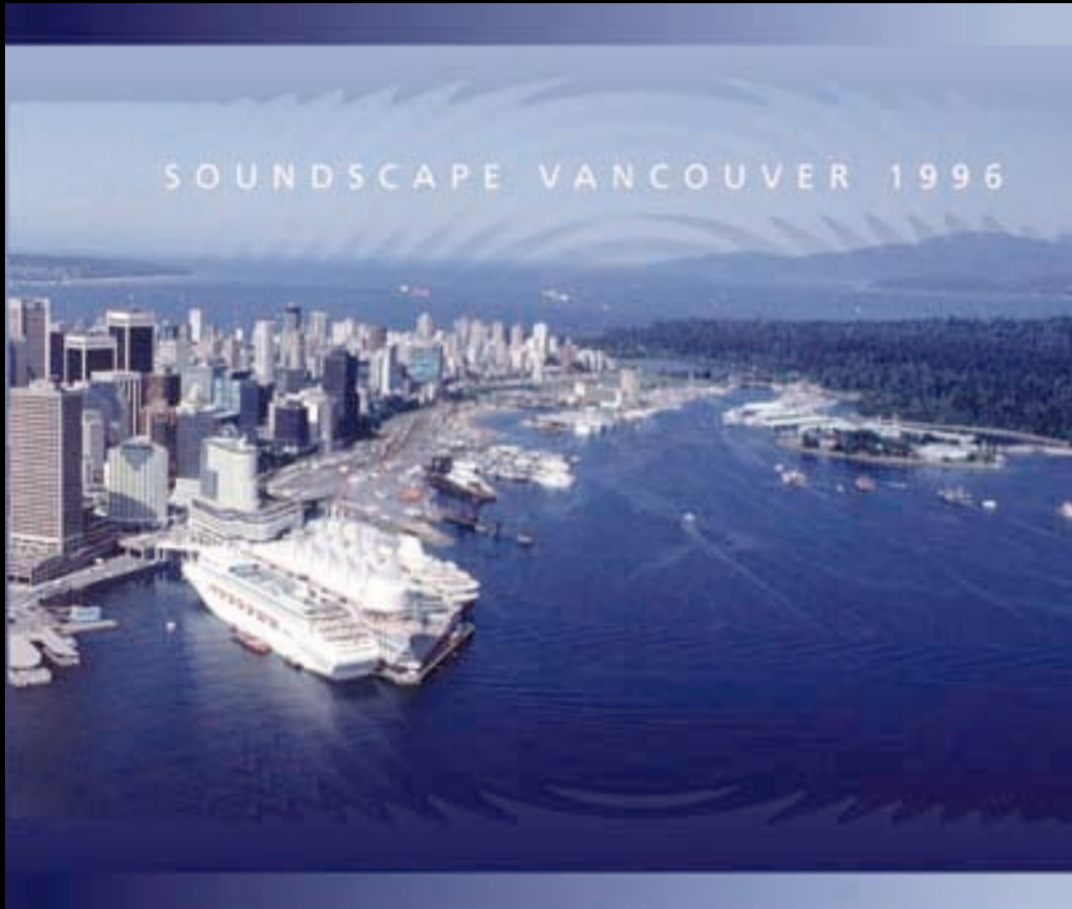


### Entrance to the Harbour (1973)

The soundscape presented here is a simulated entrance to the Vancouver harbour, beginning with the Point Atkinson foghorn (replaced in 1976). Like “Homo Ludens,” this work involves only transparent editing, the compressing into several minutes of what would have been a much longer timeline. Although this soundscape might give an aural indication of the sounds of the harbour to a listener unfamiliar with Vancouver, a native Vancouverite may hear it quite differently. Even someone who has grown up near water will react differently from someone who hails from the Prairies, for example. What is your personal response to this soundscape?



One interesting trend in soundscape composition is the use of multiple loudspeakers for reproducing the work in concert. This performance practice, called diffusion, was pioneered in France and is now increasingly practised worldwide. So-called classical diffusion takes a stereo image and projects it into the performance space via multiple loudspeakers; the process is guided by a performer at a mixing console, which is usually centrally placed. When you consider the traditional presentation of musical performance in theatres—audiences staring at a stage area—you can see that the new multi-speaker experience is inherently more immersive than that created by two speakers placed on stage. But even though the stereo source has become quite sophisticated, there is still the inherent limitation of two discrete channels. For this reason, many soundscape presentations now use a multi-channel, computer-controlled diffusion system. Rather than taping two channels and projecting them to multiple speakers in concert, the projection is done during the composition, and the resulting multichannel source is projected directly to loudspeakers in concert. The result can be remarkably similar to situations found in the acoustic environment, where discrete sounds come independently from different directions. There is no natural analogy, however, to the stereo image created through panning, where the same sound comes simultaneously from two different sources with varying volume levels. Audiences are growing more accustomed to hearing multi-speaker diffusion in movie theatres and even home listening environments, as Dolby 5 surround sound has grown in popularity. Of course, Dolby 5.1 is limited to five discrete channels; however, many soundscape (and other electroacoustic composers) are excited about the possibility of a commercially standard multi-channel diffusion medium.



### Vancouver Soundscape Revisited (1996)

In 1996, two German and two Canadian radio artists/composers were invited SFU's Sonic Research Studio in the School of Communications to create portraits of Vancouver, "musical glimpses into their experience of listening to Vancouver." They used the extensive WSP sound archive as well as their own recordings from the city.

Music Example-- Barry Truax, Pacific Fanfare (1996)

Pacific Fanfare is composed of ten soundmarks recorded by the WSP in the Vancouver area either from the early 1970s or more recently, and thus reflects the changing soundscape of the city. The various sound signals are heard both in their original state, and digitally resonated and time-stretched in order to let them 'resonate' in our own memories."

The time-stretching that Truax uses is a complex digital resynthesis technique called granular synthesis, discussed in Unit Eleven. Does this unusual technique remove you from the original soundscape? Does the work become more abstract?



Claude Schryer, Vancouver Soundscape Revisited (1996)

. . . an impressionistic portrait of the musicality and poetry of the soundscapes of Vancouver using combinations, comparisons and transformations of archival sound.

An exploration of the past, present, and future of the Vancouver soundscape and a search for meaning on the borders of recognition, abstraction, and poetry. My compositional method was to select sequences from the WSP collection, edit and catalogue them by spectrum, category, function, pitch, and context, and experiment with various combinations and modifications of the material until an interesting “sonic alchemy” was found.

Schryer’s use of the source material verges upon musique concrète because the original soundscapes are combined in such a way (shorter fragments, more layers) that the listener cannot form semantic associations with the sounds. Do you feel that this piece verges on collage because of the way the sounds are combined, or are you able to perceive correlations between the sounds?



Hildegard Westerkamp is one of the world's leading soundscape composers. An original member of Schafer's World Soundscape Project, Westerkamp has travelled the world recording soundscapes, and she uses her urban, rural, and wilderness recordings as sources and inspirations for her compositions.

Westerkamp has a very inclusive attitude, suggesting that all sounds in the environment are potential material for composition, just as all words are potential material for writers. The role of the composer is not necessarily to create the material, but to select, organize, and process it.

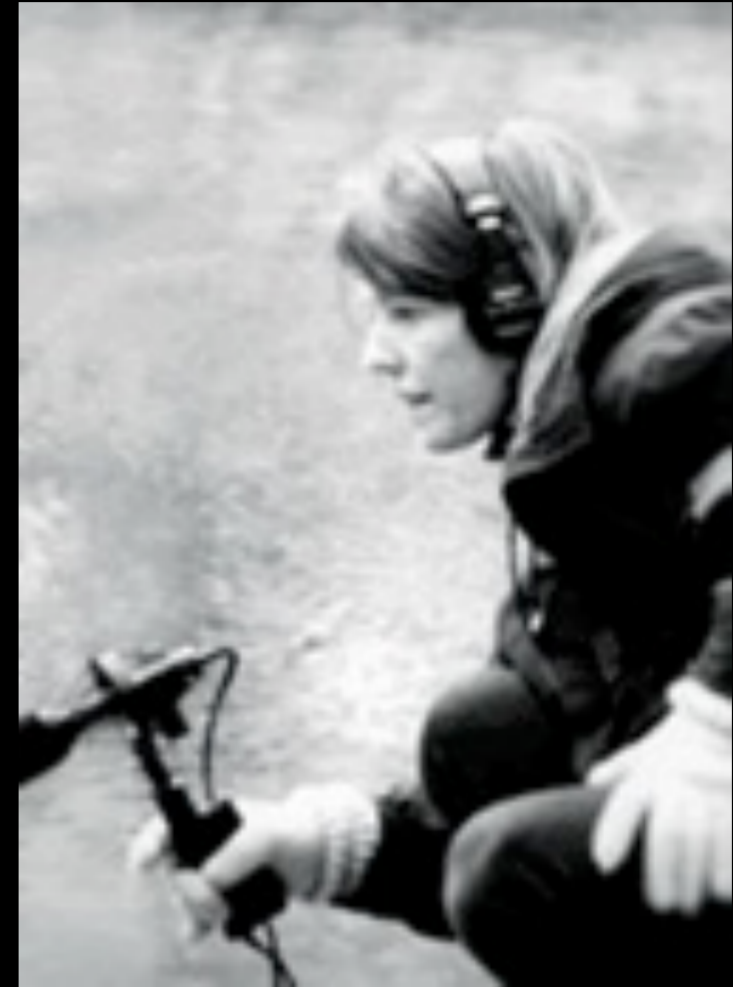
I like to use the microphone the way photographers often use the camera, searching for images, using the zoom to discover what the human eye alone cannot see. I like to position the microphone very close to the tiny, quiet and complex sounds of nature, then amplify and highlight them for radio or any other electroacoustic medium; to make them audible to the numbed urban ear. Perhaps in that way these natural sounds can be understood as occupying an important place in the soundscape and warrant respect and protection.



With this statement, Westerkamp shows her foundation within Schafer's acoustic ecology. At the same time, she treats her material abstractly at times and explores the musique concrète tradition as well:

I like walking the edge between the real sound and the processed sound. On the one hand I want the listener to recognize the source, and thus want to establish a sense of place. But on the other hand I am also fascinated with the processing of sound in the studio and making its source essentially unrecognizable. This allows me as a composer to explore the sound's musical/acoustic potential in depth.

"But I abstract an original sound only to a certain degree and am not actually interested in blurring its original clarity. I transform sound in order to highlight its original contours and meanings, similar to the manner in which a caricaturist sharpens the contours and our perception of a person's face." Westerkamp also propounds the concept of interaction with the soundscape. Rather than passively recording an environment, she will actively make sounds within it, either with her own voice, or with native elements. For example, in "Cricket Voice," she plays on the spikes of various cacti in the desert, drumming on dried roots and palm leaves, and explores the resonances of an old water reservoir.

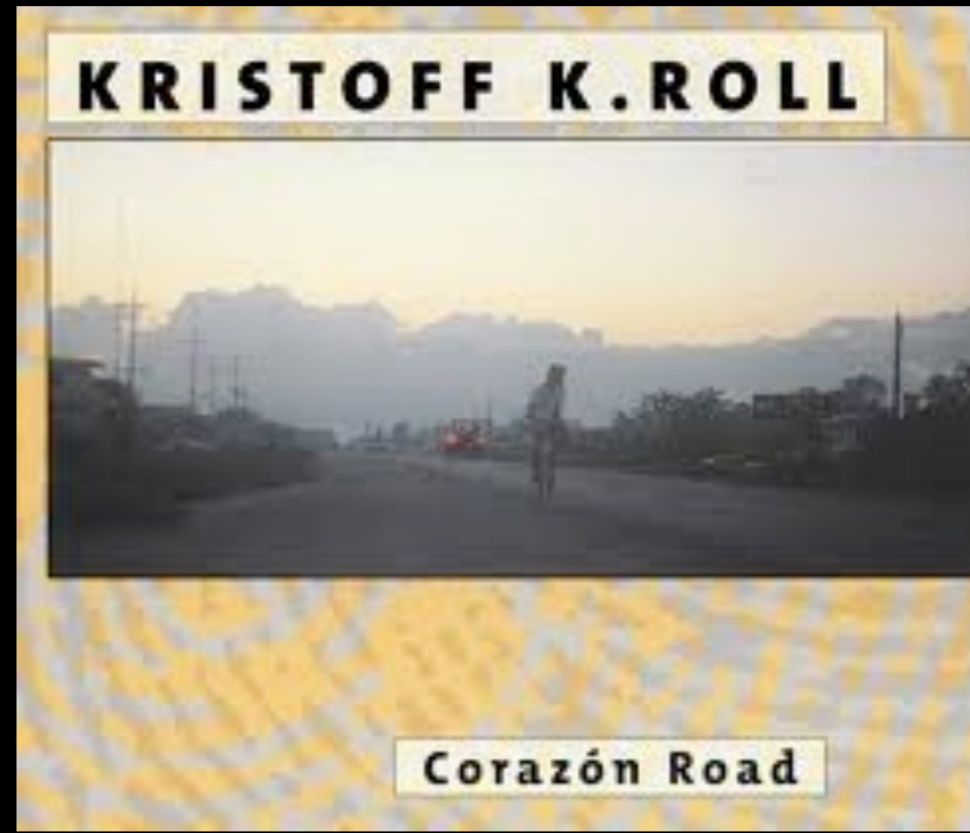


Hildegard Westerkamp, "Breathing Room" (excerpt), (1991)  
Westerkamp considers this work a self-portrait. What elements of the work contribute to this idea? How would it have been different if she had used more of an *amusique concrète* approach? Or a conventional acoustic instrumentation? >>Music Example>>  
Hildegard Westerkamp, "Beneath the Forest Floor" (excerpt), (1991)  
The above link will take you to ElectroCD, an electroacoustic music distribution company. Click on the [dsl/mp3](#) link highlighted in yellow at the top of the page.  
"Beneath the Forest Floor", of which only an excerpt is presented, is an evocative work that situates the listener in the rain forests of Vancouver Island. Would a work such as this lose some of its magic if the listener is not as familiar with this place?  
More information on Hildegard Westerkamp, including streaming audio excerpts of her music, can be found [here](#).

## *Collaboration in Soundscape Composition*

One interesting outgrowth of soundscape composition is collaboration between composers. Composition is a very solitary activity and, at least in the modernistic sense, it involves a great deal of ego in defining the perfect relationship between sound events. There have been few, if any, successful collaborations between composers in the history of music. However, electroacoustic music has spawned a number of collaborations—for example, John Cage and David Tudor. Many of the other collaborations, such as those that produced the *elektronische musik* out of the Cologne studios in the 1950s, were collaborations between composers and technicians—one artist had the vision while another had the technical skills to realize this vision.

Soundscape composition is the process most removed from traditional acoustic composition and its emphasis on the relationship between abstract sound (pitched) events. The success of a soundscape work often depends less upon the subjectively perfect relationship of individual sounds and more upon the impression of the overall meaning that the work entails. For this reason, soundscape composers often collaborate quite successfully to create works that communicate a consistent theme (e.g., Schryer's soundscape of Quebec City) without conceding any personal aesthetic.



Kristoff K. Roll is an electroacoustic performing and acousmatic composing duo made up of Carole Rieussec and Jean-Christophe Camps. Their stated goal is to “capture the poetry of everyday life from amongst the musical worlds and their codes.”

Corazón Road is the musical diary of a trip in Central America. It is neither an ethnological document nor a media report, but was born from the meeting of two poetic ears and two pairs of eyes looking on fast, astonished, at people, things, landscapes and sounds. It’s a foreign reality that was experienced through bits and pieces, sound worlds that were captured daily by two sensitivities, as well as by chance. It is a journey and a music equally shared by the two of us. The dynamics and the quality of the sound vary constantly. These fluctuations and nuances become a way of expressing the poetry of reality. Corazón Road is an invitation to immerse oneself in the depth of a world. Music Example >>

Kristoff K. Roll, “Corazón Road: Justicia” (excerpt), (1993)

Rieussec and Camps state that the entire work is a diary of outsiders looking at a foreign world. If soundscape composition relies upon the composer allowing the listener to establish a relationship to the sounds based upon personal experience, how can this piece succeed as a soundscape composition? How does a work like this compare to Westercamp’s self-portrait, “Breathing Room,” which is also a private work?



Live electroacoustic music can now deal with live transformation of sound objects. Thus, it is now possible to treat soundscapes as source material within a live electroacoustic music work.

As we have seen, much of the success of soundscape composition depends upon the relationship of materials, both in the selection of sources and subtlety of processing. This is often difficult in real time performance, where contemplative decision-making is not possible, and the excitement of improvisation is substituted. This is therefore one of the main challenges of live soundscape composition.

Furthermore, the interest in multichannel diffusion – 8 or more speakers in a concert setting first explored in soundscape composition – has spread into live electroacoustic performance. This is an example of some initial experiments into creating live soundscape. Stream Studies are a series of studio studies exploring the possibilities of a real-time work, Stream. Everything was “performed live” in the studio. The work explores different connotations of the title: streaming water, streaming people, streaming data. Music Example Arne Eigenfeldt, “Stream Study 5”, (2004)

Note the use of long gestures and subtle processing that does not change drastically. This is partly due to the aesthetic, but also to the difficulty in making dramatic changes in a performance situation. Although the work succeeds in performance, does it still work as a studio composition? In other words, was the success of the work compromised for performance purposes?



New interest in soundscape has developed due to the recent advances in quality of portable recorders in relation to cost. Formerly, digital audio tape recorders were very expensive, as were portable stereo microphones (ranging from \$3000 – 5000 for a good quality microphone and recorder).

Now a very good quality digital recorder, such as the Zoom, and stereo binural microphone can be bought for less than \$500. As a result, anyone interested can afford to try soundscape recording.

Furthermore, the internet has brought together those people interested in the field of "field recording", which has rebranded itself as "phonography". Phonography can be defined as the use of field recordings (which we formerly called soundscape recordings) as the primary source for composition. Like the original soundscape composers, a mixture of non-intrusive editing to more extreme processing is acceptable for compositions.

Various sites have popped up on the internet in recent years that collect sources/ compositions to do with such works. The good news is that there are now lots of wonderful source recordings from around the world, new found sounds for composers interested in soundscape composition. The bad news is that MP3 compression is often less than ideal, and many wonderful recordings are ruined by poor conversion into the popular web format.



## Quiet American

One composer who was one of the founders of phonography, and has been doing it for some time, is a composer who uses the pseudonym "Quiet American". As he states on his website, "the world makes its own music, but we rarely listen with naïve ears". "The project began as I grappled with what it meant to be a tourist in another culture, It continues as I grapple with what it means to be a tourist in my own."

His work began in 1998 during a long trip to SouthEast Asia, a minidisk recorder, and a binural microphone set. On his website, ([www.quietamerican.org](http://www.quietamerican.org)), he has placed reams of source material from this, and subsequent, travels. Music Examples

Quiet American , "email", (1998) "checking email in a storefront in Saigon" Quiet American, "Malaria "(from Vox Americana,1998) From these source recordings, he created a full-length album, called Vox Americana. These works are more "composed" ; mixing sources with processed material. "delirium, fever, submersion. The irreality of drifting in Ha Long Bay; a day on the water becomes a puzzle in indigo, periwinkle, cobalt, grey, gray, green, and diesel. At some point every traveler succumbs to fever."



Francisco López is a Spanish composer of music that bridges traditional soundscape and contemporary ambient music. Extremely prolific (more than 160 sound works, released by over 130 record labels), López strives 'to reach an ideal of absolute concrète music'. He considers himself separate from the classical soundscape movement, in that he has never pursued a documentary or representational goal, and instead approaches his work from the more traditional "sound object" perspective. And in this sense, the evolution of his aesthetics and conceptual background is a profound process of refinement towards an extreme musical purism, with a voluntary and forceful refusal of any visual, procedural, relational, semantic, functional or virtuostic elements. What is left is an astonishingly powerful musical essence capable of reaching both the deepest and most dreadful abysses of crude strengthness and the most subtle and diffuse aural edges; a complex territory of anti fast-listening where perceptual awareness and the power of naked music are strikingly rediscovered; a world where things are uneasy, unclear, unsolved and where one is forced to immerse and search. He calls it belle confusion.

– Pedro Higuera, Sonom Studios >> Music Example >> Francisco López, Untitled #90, (1999)  
“...hyperrealistic field recordings of insect sounds subjected to a fine process of frequency enforcement so to generate simultaneous states of emptiness and contraction of the sound space. Foreground music, sounds to be seen and to be drowning into – 'ambient absoluto' that reaches unreachable kinds of organic/noise sonic frequencies.”

# *Soundscape Composition & Electroacoustic Music*

Soundscape composition differs from other electroacoustic music in its relationship to its source material. Both *musique concrète* and *elektronische musik* treated their source material as abstract elements, essentially substituting sound for pitches and manipulating these materials in very structured ways. Because soundscape composition requires the listener to form a semantic relationship with the sounds, it tends to use longer sources. For example, take the sound of children playing: a composer of *musique concrète* would define such a source by its timbre, its envelope (both timbre and amplitude), and its internal rhythms. The composer could then focus on these distinct parameters, processing them individually to create new sonic possibilities. In doing so, the composer might edit the sound object to such an extent that its source became unrecognizable.

## *Soundscape Composition & Electroacoustic Music*

But the soundscape composer is interested not only in the timbral aspects of the source but also in its meaning. When the listener is presented with a recording of children playing, the first few seconds will be taken up by mere recognition and confirmation (Hmmm . . . sounds like children playing . . . a kid's party . . . no, outside . . . a playground . . . yes!). Once the sound has been identified, the listener will begin to form an association, relating the sound to personal experiences. In the case of children playing, the association could be, perhaps predictably, his or her own childhood, carefree, playful, innocent, and so on. Once this association has been established (the process may take up to half a minute), the composer can begin to manipulate the relationship. For example, what sound will be presented next? Machine gun fire, for example, would be an extreme example of contrast, and it would create a fairly predictable listener response. Waves lapping at a lakeshore, on the other hand, would offer a different, much less extreme contrast.

# 3 *Soundscape Composition & Electroacoustic Music*

A different manipulation would be to begin processing the source material, maintaining its recognizability, yet at the same time, abstracting it. This method might provoke a dreamlike association; the listener can distinguish the material, yet perceives it as somehow mutated.

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BARRY TRUAX

*Truax, B. (1984).  
Acoustic Communication.  
Norwood, NJ: Ablex.*