

Chapter 9 - Breathing Room and the Twofold Pressures of the Cyborg Body

[Abstract](#)

[Acknowledgments](#)

[Chapter 1](#)

[Chapter 2](#)

[Chapter 3](#)

[Chapter 4](#)

[Chapter 5](#)

[Chapter 6](#)

[Chapter 7](#)

[Chapter 8](#)

[Chapter 9](#)

[Chapter 10](#)

[Chapter 11](#)

[Appendix A](#)

[Appendix B](#)

[Appendix C](#)

[Appendix D](#)

[Bibliography](#)

Theorists in the areas of feminist aesthetics and epistemology discuss a contradictory stance which characterizes feminist work with technology. Teresa de Lauretis, in her discussion of feminist cinema, claims that a contradictory stance is specific to feminism. She describes it as:

a twofold pressure, a simultaneous pull in opposite directions, a tension toward the positivity of politics, or affirmative action in behalf of women as social subjects, on one front, and the negativity inherent in the radical critique of patriarchal, bourgeois culture, on the other. It is also the contradiction of women in language, as we attempt to speak as subjects of discourses which negate or objectify us through their representations (1987: 127). As de Lauretis describes it, feminist artists are in a constant state of tension, equally pulled in two quite different directions, attempting to affirm a range of different creative approaches while criticizing existing cultural assumptions that are represented in contemporary language.

The discourses of technology are particularly objectifying, representing the relationship between artist and work as one of gendered power and control. I have written elsewhere about how music technology magazines appeal to stereotypically masculine imagery related to sports and war to define their community (McCartney 1995). Working within this technologically musical community puts women composers of electroacoustic music in a seemingly contradictory and often uncomfortable position: they are at once represented as the object of control and the subject exerting it.

What can one do in this uncomfortable situation? To resolve the contradiction would be to sway one way or another: to take a stereotypically masculine position of control over the world, and deny a connection with feminine qualities, or to take a stereotypically feminine position of connection with the world, and deny a connection with masculine qualities. Neither of these positions would work for very long, since the composer is still a woman working with technology that is represented as facilitating control over the world. There is another alternative. In her "Cyborg Manifesto," Donna Haraway says that the strategy of irony acknowledges contradictions without attempting to resolve them:

Irony is about contradictions that do not resolve into larger wholes, even dialectically, about the tension of holding incompatible things together because both or all are necessary and true. Irony is about humour and serious play. It is also a rhetorical strategy and a political method.... At the centre of my ironic faith ... is the image of the cyborg. (1991: 149)

Haraway's cyborg is a mythical being, part organic and part cybernetic. It cannot dream, as humans sometimes do, of a return to organic wholeness, because that is not its history. It is fashioned from both machine and organism, what Western philosophy trains us to imagine as radically separate: man and machine, nature and culture. The cybernetic and organic parts of a cyborg's being must exist, somehow, together.

The Cyborg Body of Breathing Room

The image of an ironic cyborg is evident in Hildegard Westerkamp's short tape piece *Breathing Room* (1990), which is explicitly concerned with breathing, structured around the breath, bringing together bird sounds, water sounds, and machine sounds, constructed technologically. Westerkamp's ambivalent feelings about technology are evident when she speaks of the electroacoustic studio. On the one hand, she describes it as a place where she can give her creative voices room to breathe, and is protected from the outside world. She says:

The studio environment has provided me with a niche where I could find my own creative voice without interference from the surrounding social, cultural context ... Since it has always been hard for me not to give external voices more power than my own inner voice, this was an important stage for me and, given my socio-cultural background, this separateness may to some extent always remain an important part of my creative process. The sound studio has taught me to be in touch with that inner voice and to believe in it. In my electroacoustic compositions my inner voices speak.... I would go as far as saying that these isolated places are perhaps the urban person's replacements for wilderness experience, places where one can play/work undisturbed and uninterrupted at a distance from daily life. (Westerkamp 1988: 133-4). Particularly intriguing in this quote is her description of the studio as like a wilderness setting in its peace and privacy a natural image applied to a technological location. At the same time, Westerkamp also speaks of the studio as a stifling environment, where she finds it difficult to breathe:

I really hate to go into studios, because of that health aspect.... You know, my back aches afterwards, I'm not breathing properly, I just simply feel very tired and exhausted. And I actually experience it as a huge contradiction to what I'm trying to do in the pieces. It's the same with the... performance spaces.... [they are] controlled environments. And yet when the pieces are playing, they open something up in the audience, they open something up in me. They're saying something about place, about environment, about

ecology, and about acoustic balance in our lives And yet the contradiction is not gone (Westerkamp interview with McCartney, 1993). So the studio, for Westerkamp, is at once an expansive and an enclosing space, where her creative voices have room to speak, but where she eventually has trouble breathing. Similar comments are also made by other women composers that I have interviewed. They speak of pleasure in studio work and possibilities for developing new languages of expression, and at the same time, they criticize the patriarchal ordering of the studio, where minds command sound and bodies are neglected. Susan McClary writes that Laurie Anderson, too, is at the same time fascinated with technology, and critical of its alienating influence (1991: 137).

This ambivalent stance towards technology is given voice in *Breathing Room*. This piece is particularly important as an index of Westerkamp's style because of the request that the producers made of the participants on this CD. They asked Westerkamp, one of two women out of twenty five composers involved in the project, to produce a work that summarized her style in three minutes.

Westerkamp's style is characterized by an approach to soundscape composition which is particularly concerned with the subjectivity of the recordist/composer in relation to the sounding environment. Westerkamp insists on her bodily presence through her work. In the liner notes for *Breathing Room*, Westerkamp says:

Music as breath-like nourishment. Breathing as nourishing musical space. The breath my breath is heard throughout the three minutes. All sorts of musical/acoustic things happen as I breathe in and out. Each breath makes its own, unique statement, creates a specific place in time. Meanwhile the heart beats on, propelling time from one breath to the next (Westerkamp 1990). Her desire to create a breathing environment within musical space is influenced by her contact with American experimental composer Pauline Oliveros, who influenced her compositional practice, teaching techniques and approach to listening, as I discussed in Chapter Four.

Musical Structure: Breathing in the Studio

The request to encapsulate her style in a three minute piece created a difficult task. And to complicate matters, at around the same time, she had been commissioned to create another piece. This one was to be a response to the 1989 Montr'Yal Massacre, in which a sole gunman killed fourteen women engineering students at the 'cole Polytechnique, an engineering college in Montr'Yal, calling them feminists. Westerkamp's schedule at this point was frantic, and she found the Montr'Yal Massacre an important and difficult subject. Both commissions initially seemed challenging.

Westerkamp responded by creating breathing room within these difficult demands. One day, she lay down on the studio floor and breathed deeply for nine minutes. She recorded this interlude of relaxed breathing, then used it to form a rhythmic structure, adding a mechanical, repetitive pulse. Over these rhythmic pulses, she layered reworked material from earlier pieces, using this opportunity to reflect on her previous work. This method then formed the 'lectroclip piece, and later became the basis for the beginning and end sections of her piece about the Montr'Yal Massacre, L 'cole Polytechnique, in which breathing is gradually interrupted by more and more ominous sounds, then eventually returns in hope for continuing life at the end.

The choice of one's own breath as a compositional structure is a radical one, for a number of reasons. Frances Dyson points out that philosophers since Plato insist that proper voice can only be produced by "barring" the breath:

The coming and going of life which the breath represents brings the inevitable mortality of the body too close to the voice It interferes with the smooth functioning of the voice of the mind that bodiless instrument which continues to speculate and reflect uninterrupted in the mind's I/eye for all eternity. It allows death, absence, to touch the light of reason and the vision of the soul. (1994: 175) The sound of breath is a constant reminder of our mortality, our physicality. Susan McClary notes that "a very strong tradition of Western musical thought has been devoted to defining music as the sound itself, to erasing the physicality involved in both the making and the reception of music." Electronic composition, with its ability to eliminate performers, can potentially form the extreme of this idealist trajectory (1991: 136). But in *Breathing Room*, the composer insists on her bodily presence through her own voice.¹ With each breath, she creates the illusion that she is breathing in sounds the sounds of water gurgling, of birds singing, of an airplane passing overhead, of windchimes. The mechanical 'heartbeat' pulse, fading in after about thirty seconds, continues throughout, fading from foreground to background at different points in the piece, but never disappearing.

The use of breathing as a compositional structure reflects Westerkamp's respect for the acoustic environment as active and alive, and in dialogue with her as a composer. By creating the illusion of breathing in sounds, Westerkamp makes tangible the function of the breathing tract as a conduit between the body and the environment. Robert Fried says: "Breathing brings us into intimate communion with our environment. We can think of the lungs as external organs, always exposed to the atmosphere" (1990: 8). Westerkamp expresses her sense of respect for the environment through refusing to think of sound as merely a compositional resource. At the same time, she is not limiting herself to documenting nature. Her studio work is a dialogue between the original sound in context and her imaginary constructions. Above all, her approach reflects a responsibility to the natural world, and a desire to avoid completely effacing it with technology, allowing

sounds to breathe within their own environments, while creating imaginary constructs that juxtapose different contexts.

Breathing Room Analysis - General Description

Breathing Room is a 3-minute tape piece, using both acoustic and synthetic sounds. It has an approximate pitch range of 4 octaves, and noisy (unpitched or timbrally complex) sounds predominate. It moves at a slow tempo, structured by the irregular rhythm of the fifteen breaths that continue throughout the piece. Each breath is separated by a space (at first silence, then filled with processed and synthetic sound). The piece becomes thicker in texture, and reaches a point of maximum density at the tenth breath, decreasing in timbral diversity and density after this point. In this way, its shape can be said to resemble the shape of a single breath. I have analyzed four breaths below in detail, to demonstrate the shape of the piece. Breathing Room is on the site in its entirety, in the "In the Studio" section.

Breath 1 (0:01)

This section has a narrow pitch range (3 octaves) which is higher than in later sections. There are only three different timbres (breath, water, birds), followed by silence. The timbral content of the section is more noisy than pitched, since only the bird sounds have defined pitch, while the breath and water sounds are more complex. Dynamics range from p to mp. The breath has a quiet inhalation, and an open-mouthed exhalation, which is louder, and rises in pitch. The point of greatest dynamic/timbral diversity/vertical density is towards the end of the inhalation. The inhalation is short (2 seconds), followed by a longer exhalation (4 seconds), and four seconds of silence.

Breath 4 (0:35)

This breath has a broader pitch range (approximately 4 1/2 octaves), and more pitched material (processed sounds, birds, airplane, mechanical beat). There are two noisy sounds: breath and water. There are six different timbres, so the breath is more dense. The inhalation is loud and long (5 seconds), followed by a quieter, shorter exhalation (4 seconds). This breath is less audible than the first, and the other sounds are louder. It is followed by 5 seconds of just the mechanical beat and short processed sounds. The mechanical beat maintains a constant pitch of Eb2 throughout. The airplane is just above E3, and short processed sounds Eb4-E4. The bird sounds are clustered in a range from two to three octaves higher than the other sounds.

Breath 10 (1:50)

The pitch range is approximately the same as breath 4. This is the breath with the greatest timbral diversity, with nine different sounds: breath, mechanical beat, water, june bug, airplane, wind chimes, rattle, long and short processed sounds. The breath is loud on both the inhalation and exhalation, with the mouth moving on the exhalation, where the pitch rises. The inhalation is 4 seconds long, exhalation 3 seconds, and a 4 second section with only processed and mechanical sounds. This is the only time that the rattle appears in the piece. The wind chimes are in the same approximate pitch range as the earlier bird sounds.

Breath 15 (2:47)

Here the timbral diversity has again been reduced to four sounds: breath, mechanical beat, wind chimes, short processed sounds. The pitch range is about the same as for the fourth breath. There is a long, quiet inhalation (5 seconds), followed by a shorter, quiet exhalation (4 seconds), and a section with just the mechanical beat and short processed sounds. The mechanical beat continues to maintain the pitch of Eb2. The airplane is between Eb3 and E3. The long processed sound is at a pitch of A4, while the short processed sounds are close to it in pitch, rising from F3 to Gb3. The windchimes are several octaves higher, in the same pitch range as the earlier bird sounds.

Listener Responses

When I first heard Breathing Room, I was struck by the feeling of intimacy that I experienced on hearing close-up breathing. The interplay of environmental sounds intrigued me, as well as the gradual movement from air to water, the complexity and density of the sound world that was produced. I also felt vaguely anxious.

This last sensation confused me somewhat, leading to a decision to analyze the piece so that I could understand this response more clearly. I solicited the responses to Breathing Room of a range of listeners. Some of these were Canadian composers, both men and women. Some were people who said that they rarely listened to electroacoustic music. These two groups both listened to the piece on tape in their homes, and wrote open-ended responses to the piece. I also played it for four university classes: a graduate class in Women's Studies, a graduate class in Musicology, an undergraduate listening class for non-Music majors, and an undergraduate class in electroacoustic composition. Only some listeners decided to submit their responses. Each of the class members wrote open-ended responses on paper. None of these listeners were given any program notes until after listening. I asked listeners to complete a questionnaire giving me details about their gender, ethnic identity, age, and background in electroacoustic music. The comments that follow are drawn from these listeners' responses, and from my

analysis.

Breathing as Essentialism

Two listeners, both from the Women's Studies class, describe this piece as gendered female. One respondent says: "Birds, breathing, decidedly a female gendered piece." I wonder whether a piece structured by a man's breathing would be described as gendered male, or whether these listeners are reacting to the overly simplistic essentialist equation body=woman or bodily sounds=gendered female? Later, the same listener asks whether the essentialism is intentional. A discussion regarding essentialism followed in the Women's Studies class, with discussants noting that a woman composer working with environmental sounds risks being described as essentialist, whereas a male composer would not. On the other hand, another listener (a man in the undergraduate music class) hears the breathing as a man's: "Vietnam, swamps, birds, soldier in pain or feeling really exhausted... suspenseful and scary atmosphere...he is a survivor." His image of a soldier in the jungle perhaps leads him to hear a man's breathing rather than a woman's.

Several listeners interpret the use of natural and bodily sounds as more generally stereotyped or hackneyed, creating an essentialized nature. One male composition student praises Westerkamp's layering and spatial composition, then adds: "ClickY [sic] sounds of birds and breathing hindered the piece." Another male composition student says: "Is this a Solitudes2 tape? Touristy New Age...back to Nature."

Interestingly, these listeners do not comment on the sounds of airplanes that recur several times during the piece. Solitudes tapes would never include such urban sounds. Neither would they include the sound of a person's breathing, since the title Solitudes suggests their intent: to create a purified wilderness, devoid of any sounds of humans or cities. Westerkamp does use equalizing and mixing to idealize her sonic world: the airplanes become quieter than the crickets. But they are never erased: the urban world does not disappear completely, but is brought into her idea of balance, closer to the sounds of crickets and birds, with transportation machines more in the distance but still present.

Breathing as Disruption

While many like hearing the relaxed breathing, and feel connected to it, others describe it as annoying or disruptive. One composer says that it disrupts his own breathing pattern. A female composition student says that the breathing "hits you right in the chest." A male composition student reports "The breathing aspect gets very annoying very quick sounds superficial." It is interesting that all of these descriptions of annoyance or disruption are from people involved in electroacoustic composition (although not all composers have this reaction), and are not mentioned by other listeners. Perhaps, as Frances Dyson (1994) notes with regard to the development of the contemporary radio voice in the radio studio, bodily sounds are still not considered acceptable by many in the electroacoustic studio.

Breathing as Threat

Sometimes the breathing is perceived as threatening. A Women's Studies student says: "Threatening, relaxation, relief (i.e. hearing relief in the expulsion of breath, but also my own sense of relief that what had sounded like the beginnings of a threatening phone call, a heavy breather, was in fact, simply an amplified track of someone breathing)." This last reaction puzzled me until I realized that most often, when we hear amplified breathing, it is stressed breath, either through a threatening phone call, or in the context of television or film soundtracks, where it is often a sign of danger or excitement. The amplification of relaxed breathing something we rarely hear establishes an intimacy between performer and listener, creating the feeling that we are right next to the composer as she breathes. In many popular media soundtracks, especially in suspense-linked dramas such as horror and thriller films, breathing right behind the protagonist, or the invasion of an intruder through the held phone receiver so that even a breath or a whisper can be threatening, are both examples of intimate bodily sounds used to imply that this kind of intimacy is too close for comfort. I also consider this issue in relation to Cricket Voice.

Awareness of Breathing

Those who enjoy the breathing, and I include myself in this group, mention a heightened awareness of their own breathing through the piece. One listener in the Women's Studies class says: "the breath is like surf, inevitable and always but never the same." Several others describe the breathing as relaxed, sensual or meditative. Madame X (41f, grad Dance) says "a sense of peacefulness, relaxation. Yawning; waking up and sensing the space around me." Rusty (26m, grad Music) comments: "Yawns seem a very human touch there s a human spirit here among other spirits yawns are how the breathing, which summons, is grounded. A very reassuring space, without seeming naive." The breathing, and especially the yawns, is perceived by these listeners as a reassuring human presence, and an invocation to sense the surrounding world.

Caffe (21f, Waterloo theory) responds "sometimes it s hard to tell if you re hearing the wind or someone s breath." The association of environmental sounds with breathing reminds this listener of the similarity between air moving outside the body in wind, and inside the body in breathing.

Beth (23f, Waterloo theory) says "I m not particularly fond of listening to breathing in class find it too erotic." This raises the issues of intimacy, and the bringing together of public and private realms, which characterize many of Westerkamp's works. As in Moments of Laughter, Westerkamp brings intimate bodily sounds out into the open with the aid of amplification. A private moment of meditation and centering is made public through its composition and publication on CD. For some, this public intimacy is uncomfortable.

Mechanical Heart

Not all of the sounds are breathed in. Another source of tension for some listeners is the mechanical pulse, which Westerkamp refers to as a heartbeat. A student in the undergraduate listening course juxtaposes the following words: "outside river: power plant? heartbeat? illness, impending doom, struggle, extinct." A male composition student says: "Pulse in background creating tension from the foreground relaxation. As the pulse gets louder it creates a worry and stress within."

More extended listening reveals reasons for this worry and stress. Several listeners, including Westerkamp, refer to the pulse as a heartbeat. Yet this is a mechanical heartbeat, with a regular rhythm, unlike organic hearts. When someone is relaxed, their heartbeat rises slightly with every inhalation, and falls with each exhalation (Fried 1990: 156). Pulse rate tends to be more regular in stressed breathing, and a very regular heartbeat is considered a symptom of heart disease. So the regularity of the mechanical heart can be interpreted as a sign of stress.

Also, there are only fifteen breaths in the three minute piece, a very relaxed breathing rate. Yet the pulse is much faster, 140 beats per minute, suggesting much more activity. The pulse is insistent once it begins it never completely disappears, and the tempo never changes. The only fluctuation is in dynamics. As I listen to the piece, I find that my feeling of tension is directly related to how loud the pulse is, how close to the foreground. A male composition student comments: "My heart beats seem to get quicker. Feeling very anxious, waiting for something to happen." As I type this, I notice that my computer is producing a regular pulse that becomes louder as I listen. How is my body responding?

Abstracted Sounds

Abstracted or processed sounds are the last to be introduced to the piece, starting at around 35 seconds. These sounds come from two sources: fiddle-playing, and a truck brake. They have been slowed down to alter their character completely, producing gradual evolutions in timbre and pitch, and a feeling of amorphous shifting through space. Only one listener referred to these sounds, saying: "superimposed pitches create a feeling of expectation." Perhaps listeners who only hear the piece a few times do not comment on these sounds because of their subtle presence: they are rarely foregrounded. On repeated listening and analysis, however, these sounds seem more important. They form a harmonic bridge between the mechanical beat and the environmental sounds, at times forming restful octaves and fifths, at other times more complex harmonies (see analysis). They also form polyrhythms with the mechanical beat, making it seem less relentless. Although they continue between the breaths, some of the shorter processed sounds join dynamically with the environmental sounds, and are inhaled. Westerkamp considers work with sounds like the truck brake to be a political act:

When you know a sound, or when you know how something works and how it affects you, it is already the beginning of action. Then you can begin to deal with it. Then you can decide whether or not you want to wear ear plugs ... When I hear a truck brake and I say, "that's fantastic, I want to record it," then I'm not as disturbed by it. When there is a political issue and you don't want to know about it, it's actually much more energy to block it out, than to ... take it on and begin to act. It's like breathing again. (Westerkamp, as quoted in Young 1984: 7)

When Westerkamp begins to work with a sound, she is not as disturbed by it because she is already starting to do something about the disturbance by bringing listeners' attention to it. To begin to act in this way is like breathing again, whereas to block things out is like holding one's breath until a disturbance passes. For Westerkamp, the metaphor of breathing is an important one, and the act of breathing is a focus, meditatively, compositionally, politically and in moments of anxiety as a centering force.

Different Places

For many of the listeners, the imagery associated with this piece is related to memories or fantasies of different places. Westerkamp's work here is not associated with a particular place in the liner notes, as for instance with Cricket Voice, Beneath the Forest Floor, or Banff Razzle-Dazzle. However, because she appears to breathe in all kinds of environmental sounds, I have always imagined a sound studio in the middle of a forest, close to a city but not part of it, where instead of reaching out to sounds on a computer screen, Westerkamp transforms and juxtaposes them by taking them into her body.

Several listeners speak of inner body places. Shona says "In the womb." Eve Angeline says "life within woman...inner world," while Jean feels she is "being brought back into my body after having to have left it previously in order to survive." Ishmael relates the bodily sounds to pregnancy: "Pre-natal exercises in the woods."³

Some listeners focused on movements between elements, between different environments, or from inside to outside, likely inspired by the movement of air in and out of a breathing body. X: "We're travelling like the air, from inside the beings to the outside backyard." Yorgay remembers his home on the prairies, and a journey into forest: "me in my bed back on the prairies... spring sunlight. Shadows, undergrowth as I advance into the tall deciduous forest. Unafraid presence of other beings or spirits." Mark experiences a movement from water to air: "Natural, like swimming ... underwater then up into the air."

Others experience outside locations, usually rural or wilderness. Dave thinks of "relaxing by a brook." Jane: "hot sun and water in the forest by a river." Charles: "an open field, blowing grass." Madame X: "walking through the woods." Sam: "early morning in a rustic setting." All of these places are similar in their seeming peacefulness and openness.

Some other listeners heard environments that were not as clearly natural or spacious. Y moves from a natural setting to a huge industrial transformation of it: "outside...river--power plant?" Elizabeth also begins with a serene setting, then shadows move in: "ocean, floating...reeds that blow lightly in the sun. It is now getting darker as the clouds come in and there are animals swimming through the reeds." Several people begin with serenity, then move to a darker vision. For instance, Ishmael, who began with an image of birthing exercises, moves to imagery related to death: "Prenatal exercises in the woods. (Send in the loons). No. Make that Margaret Atwood Murders in the Dark soundtrack. Nope. I dunno. It s off-putting." His "send in the loons" comment may indicate an initial discomfort with the stereotyped femininity of pre-natal exercises in the woods, which is followed by an equally deep discomfort with the foreboding associated with Atwood and darker feminist visions. In the end, neither image satisfies him. XX also begins with an innocuous vision, "At the seaside," followed by "When someone's falling asleep, she or he starting to have a kind of nightmare." For Zel, the image is only of a dangerous place: "Vietnam, swamps."

The most developed place image is from one of the listeners in the Women's Studies class, who wrote a poem about the piece.

Waking up in a tent up north
Birch Island
Railroad tracks cross
between tent and water
Cross over Mother Earth

Steaming breath of night in tent
Steaming between us and the Water Being
The insects nearby buzz
Drowning out the train

Perspective
The near and far
The dear and the dangerous
Open the flap - the train has passed
Sun rises over water - waves
I breathe in the shining breeze.

--Women's Studies 2

This poem brings together many of the issues raised by other listeners. There is an encounter here between nature and culture in the listener's imagined place. It is in a tent up north, with train tracks crossing between where the poet sleeps and the water, which is a spiritual source, connected with the water being. Nature is more sonically powerful than technology: nearby insects drown out the train, just as with Westerkamp's insect sounds that are louder than airplanes. The poet is aware of the near and the far, the dear and the dangerous. Eventually, she achieves the moment that she wants, as the train has passed and she breathes in the shining breeze.

Westerkamp metaphorically inhales and exhales environmental sounds, creating a sonic construct of her relationship with the world around her. There is a sense here of an interaction with a living, breathing world, where she can learn from ravens and crickets, and truck brakes, representing what she learns in compositional dialogue with the environment: "Music as breath-like nourishment. Breathing as nourishing musical space." In *Breathing Room*, Westerkamp creates a cyborg body, with her own human breath taking in and singing the world around her, propelled by a mechanical heart. This is not a border skirmish between human and machine, or human and environment. Haraway says: "The machine is us, our processes, an aspect of our embodiment...We are responsible for boundaries, we are they" (1991: 180). Westerkamp uses technology to create a body of work that makes audible to listeners the breathing connections between inner and outer worlds. At the same time, this cyborg body is still ironic. The mechanical heart, for instance, while metaphorically part of this body, is more rigid, and less organic, than the other sounds. So while it forms part of the cyborg body, its rhythms seem somewhat alien: mechanical heart and organic breath coexist in an uneasy tension.⁴ Listeners hear both relaxation and stress, what one respondent refers to as "the dear and the dangerous," and those contradictions never resolve.

Related Works - 'cole Polytechnique

Westerkamp adapted the tape of Breathing Room for use in 'cole Polytechnique, a work scored for bass clarinet, trumpet, piccolo trumpet, percussion, the church bells of the Eglise St.-Jacques at the University of Qu'bec, mixed choir and tape. The piece is dedicated to "the fourteen women killed violently at the University of Montr'Al, December 6, 1989." It was composed in 1990, like Breathing Room.

Westerkamp was invited to write a composition for New Music America 1990 in Montr'Al. 'cole Polytechnique is the resulting work.

[A]s a woman and composer I cannot remain silent about this event and the impact it has had on myself and many others. I want to "talk back" to it. I also want to make room to remember it, to feel what needs to be felt, to breathe, to heal, to hope, to transform energies, and to understand the work that is ahead of us. I invite all listeners to take full advantage of this twenty-minute time- span of 'cole Polytechnique (a lot longer than it took Marc Lepine to kill fourteen women) to listen inward and search for what is sacred, what cannot be compromised, what cannot be allowed to be killed inside us and therefore not in the world. 'cole Polytechnique is meant to provide the sonic/musical environment for such a journey inward.

This piece is also about life and death in a more general sense. It is about human life rhythms, their violent destruction destroyed with the same kind of violence that creates wars, kills people, abuses children and the natural environment; a violence that is born through violence, where experience of human warmth, compassion and love is missing, where nothing is sacred or worth protecting and it is about the recovery from such violence, a process of healing. (HW: 'cole Polytechnique score 1990: 2) The tape part of 'cole Polytechnique is very important in that it provides an overall structure, and instrumentalists and choir are intended to use it to cue various parts of the piece.

The tape's function is twofold: to provide the overall shape and meaning of the piece and to provide the movement, pace and rhythms for the live performers. In order to facilitate the intense interaction between tape and performers that is desired for this piece, performers must be intimately familiar with the tape part. (This includes the choir director and the choir). In fact, each performer should use the tape rather than the other performers as a point of orientation because all instrumentalists as well as the bells and the choir perform quite independently from each other. (HW: 'cole Polytechnique score 1990: 2) The tape part begins with audible breaths, as in Breathing Room. One difference in this work is that the mechanical heartbeat is heard from the beginning of the piece. The choir is directed to breathe in unison with the tape. Gradually, more and more ominous sounds are introduced along with the breathing until, at 6:00, the first gunshot is heard on tape, accompanied by newscasts about the killings, which continue until 8:20. Birdsong and water sounds continue on tape until 13:00, when breathing sounds are gradually introduced once again. The tape part from 16:00 until the end of the piece is similar to Breathing Room, with environmental sounds integrated with each breath, and the mechanical heartbeat beginning again at 16:25.

Live Parts

Westerkamp notes that the church bells appear to be tuned to A 435Hz rather than A 440Hz.

As a result all bell pitches will sound slightly out of tune with the choir and the other instruments in the ensemble. No attempt should be made to correct this as this discrepancy in tuning creates exactly what is desired: tonal frictions and musical tensions. (HW: 'cole Polytechnique score 1990: 2) The choir is asked to collect small, round, smooth rocks in the region where the piece is performed (in this case, Montr'Al). Each choir member is to hold two small rocks.

In the first section, the choir starts with two audible breaths, then sings one long uninterrupted chord, starting with B-flat and F and gradually developing into a multi-note cluster, with staggered breathing, creating a drone that undulates in amplitude, with a crescendo as each breath on tape recedes, and a decrescendo as a new breath is heard. The instrumentalists are asked to perform similar amplitude changes, so that the breathing on tape is always audible. Westerkamp encourages choir members to explore their own breathing rhythms, since unison is not a goal.

v In the second section, beginning with the first shot, the choir is directed to scream first in shock, then in horror, disbelief, etc. The last shot is followed by urgent breathing and whispering. The rocks are struck together by the choir members throughout this section to provide a high frequency sound in tandem with the explosions on tape.

After the final shot, the choir speaks the names of the fourteen women in unison and as clearly as possible. Beginning at 13:00, the choir begins to breathe in unison with the tape, with an emphasis on the outbreath. After the first breath, the choir is directed to produce a whispering or humming sound with the outbreath. In the last section, from 16:10, the choir is directed to sing one chord, with staggered breathing, as in the beginning. However, this time, they move from a multitone cluster to a single pitch (B-flat, played by the trumpet beforehand). They then expand to a four-note chord and finally end on B-flat and A (which would effectively surround the pitch of the church bell since it is playing a B-flat).

Listener Responses to 'cole Polytechnique

The original performance of 'cole Polytechnique received a number of reviews in both French and English press. In addition, I played this piece for a Grade 10 boys' choral music class at North Toronto Collegiate Institute. I had arranged to play some of Westerkamp's work at this school, and the teacher had asked me to choose two works including singing: I played Moments of Laughter for the Grade 10 girls, and this piece for the boys. In the class, I introduced the piece, reading Westerkamp's program note. Many of the students were unaware of the Montr'yal Massacre (they would have been only six or seven when it happened). I also discussed the meanings of the terms "electroacoustic" and "soundscape."

One student (Junior, 14m) was confused by the type of music, and the use of environmental sounds as sources. "I think the music is strange, and I don't know why they put so many sounds in the background. Please explain." However, many of the other students appeared to understand the use of environmental sounds. Many listed the sounds used, suggesting what each might symbolize, as in the following response:

The continuous beat in the background is describing the person's heartbeat and the breathing sounds of the environment around you represent the person's lives slowly fading away. The churchbells, also in the piece symbolize the death and passing on of the 14 women. Sounds heard in piece were: church bells, news reporters, dolphins, birds chirping, breathing, symbols, whales, trumpet, police siren, people chanting, heartbeats, a choir singing. Overall I thought that the piece of music really caught the effect of a sudden tragic occurrence. The heartbeat at the beginning makes the listener think that something bad happened from the start and the churchbells around the end of the piece is the coming and going of death. (Cream Puff Daddy, 16m)

Lestat (15m) describes the music as soothing:

Breathing, water, electricity, water again, news broadcasting, birds, church bells, trumpet, fire truck, whales, heartbeats, cat or monkey, the breaking of sticks. Overall I think that this type of music is very soothing to me. It is this type of creativeness that will advance music and bring music to a higher level.

This was the only student response that described this piece as soothing. This was also the only composer in this listening group. His description of the piece as soothing seems related to some of the commentary made by press reviewers of the original performance, in which reviewers focused on the importance of the piece to Montr'yalers, who were shocked by this massacre that happened in their city. For example, William Littler of the Toronto Star comments "An evocative score in any context, 'cole Polytechnique seemed to speak with special poignancy to the Montreallers who witnessed its premiere. In a sense, it spoke for them" (1990: 6). Littler notes that this performance is particularly evocative for Montr'yal residents at the time, several months after the tragic murders. Carol Bergeron of Le Devoir says:

L'oeuvre de Hildegard Westerkamp fut de ce programme, incontestablement, le moment le plus saisissant, le plus ŷmouvant aussi. Si cette musicienne de Vancouver a pr'f'r' l'usage d'un langage simple et direct, ce langage n'en demeure pas moins impr'gn' d'une authentique qualit' sonore. (1990: 8) The work of Hildegard Westerkamp was of this programme, unquestionably, the most striking moment, the most moving as well. If this Vancouver musician preferred the use of a simple and direct language, this language remains saturated with an authentic sonic quality (my translation). Tamara Bernstein says that the performance "taps into ancient lamenting traditions, with their cathartic and healing functions that historically served both the individual and the community" (Bernstein 1993: 20). Bernstein notes how the structure of the piece leads people from individual grief, through a communal outpouring, and back to an individual healing.

The choir brings us back to the outer, communal world by speaking the names of the victims, accompanied by tolling bells. As the ordered recitation grows louder, the choir disintegrates into a multitude of separate shouting voices. Westerkamp then takes us into a meditative musical space punctuated by soft, random-sounding cries from the instruments. Life gradually returns with the sound of water, a few birds, gently tolling bell, and once again the heartbeat and breath, accompanied by the soft sustained sound of the choir. (Bernstein 1993: 21) For Bernstein, this movement from individual to community and back again is an important facet of the healing function. This movement from individual to community is also discussed by Kim Sawchuk in a radio interview with Westerkamp from the same time:

Because I live in Montr'yal, I found it disturbing and moving. There has been a deep scarring on the public: it's not gone away; it shouldn't be erased ... I thought your composition and its setting, which created a gathering of people, was one appropriate way to work through one's painful contradictory feelings. It stresses the importance of individual life and community life in the midst of this violence. (Sawchuk 1990) For Sawchuk, the scarring on the public from this event continues and should not be ignored. Westerkamp notes that others have found the piece disturbing as well, but have not wanted to work through such painful feelings. This is particularly difficult for choristers who are performing the piece:

[some choristers] find the difficult emotions very hard to deal with and perhaps feel

invaded by it. Listeners have also reacted to it that way: Why stir everything up again? (email with Andra McCartney, February 1, 1995)

Kathy Kennedy's Choeur Maha performed the piece several years later, again in Montr'Al. She comments on her choir's reaction to the piece:

My choir, who are doing it this year, are continually in crisis about it, and every rehearsal is a group discussion. Last night at rehearsal people's reactions were just SO strong to this piece. Unlikely members being really emotional ... me too, I guess... as a group we've torn it apart from every motivational, musical, social, political, logistical aspect. (Email with Andra McCartney, December 2, 1994) Ozzy (15m), one of the student listeners at North Toronto Collegiate, says "it sounded very dark and demonic. I think it was trying to bring out the sadness of this event that took place from this shooting of the 14 women. I didn't really like it. I thought it was too scary." He was the only one of twelve who had this strong a response, although others mentioned that the piece was sad or upsetting.

Breathing Room and 'cole Polytechnique share more than similarities in the structure of the tape music. They also share a common movement between realms, where inner bodily sounds such as breathing are amplified and become public, and environmental sounds are taken into the private body. The choral piece also explores a movement between individual and community life. For some, this movement in the context of such a traumatic event is too painful; for others, it is necessary because of the nature of the event.

Other Breathing Rooms

Between 1989 and 1991, Westerkamp wrote two other pieces in the Breathing Room series. The first, written in 1989, is called Breathing Room II, for tape, bottles and audience, as well as for "The Guest," a sound sculpture by John Clair Watts. This piece was performed only once.

Breathing Room 2 was created originally for a specific occasion: a concert at the Surrey Art Gallery. It was the opening piece. The tape is simple: wind sounds from the Zone of Silence and pitches blown on tuned bottles. When the audience bought their ticket they were handed a tuned bottle. I introduced the piece as a way to catch one's breath and get into the listening space of a concert, had them practice blowing on the bottles a bit and then encouraged them to use the piece as a type of sonic meditation, encouraged them to breathe consciously and calmly (not to hyperventilate) and if they felt so inclined to blow into the bottle on their outbreath. I then went around with a microphone and recorded some of them close-up, creating a type of live mix with the tape. At that time there happened to be a sound-sculpture in an adjacent space in the gallery that I had close-miked because it also had a type of breathing rhythm. So those three sound sources made out the mix at that concert. I have never repeated that. It worked really well. The original idea for the tape part came from my experience of building a sound sculpture in the Zone [of Silence]. (Email from Westerkamp to McCartney, April 1999)

In Chapter Seven, I describe Westerkamp's process of building this sculpture, and how it was a way for her to exorcise the drunken noise that had disturbed her. This piece brings the very individual, almost lonely experience of building a sound sculpture in those circumstances into a public place, a concert. Having experienced the calming effect of blowing on a bottle to produce a pitched sound, Westerkamp decided to pass on this experience of calm and meditation to the audience as an introduction to the concert.

Breathing Room III - A Self-portrait was composed in 1991. This piece, for spoken voice and tape, recounts various experiences from Westerkamp's life until that point. I use the text of Breathing Room III as the basis of my discussion of Westerkamp's life in the Chapter Four of this dissertation. In performance, the text is accompanied by a tape part.

The piece has two parts. It starts out with seven minutes of water sounds [which predominate in the mix], seaplanes in the distance, drones, and plucked strings. The tape encourages me to warm up my voice as I lie leisurely in a hammock (not really facing the audience). This opening section is very important for me as the performer of the text. I found that in order for me to perform those words I really needed that warm up so I don't break out crying in places or feel totally neurotic. So, as the hammock is one of the most creative places for me - a type of womb environment in which I can relax and at the same time get the best ideas; a lot of my texts were written there in lightning speed - I thought it would be a good place for me to begin the piece. (Email from Westerkamp to McCartney, October 21, 1998)

This warm-up section of the piece is similar to the first minute of Moments of Laughter. In that case, the performer is directed to breathe deeply as the child's voice on tape introduces the piece. Both works are emotionally demanding, and Westerkamp in each case uses the initial moments of the piece to give the performer an opportunity to ground herself.

Then I get out of the hammock, face the audience and a synthesized waltz starts over which I speak the text. Each paragraph fits the length of the waltz. After I have spoken the text, I turn my back to the audience, and turn to face them as another persona (according to each age mentioned). And each time the waltz is slightly different. (Email from Westerkamp to McCartney, October 21, 1998)

Again, there is a parallel with Moments of Laughter, in which the performer's identity shifts as the child on tape ages from birth to seven years, and each identity is associated with different music.

[The waltz] is such a weird piece of music and yet deeply emotional for me. It has that edge of circus clowning music, and yet it is slower and full of melancholy. (Email from Westerkamp to McCartney, October 21, 1998)

This choice of musical accompaniment for the text of Breathing Room III lends an air of emotional ambiguity to Westerkamp's self portrait. Like a circus clown it is somewhat off-balance, dancing on the verge of falling, celebration on the verge of tears.

The waltz music ends after "The Golden Ball is where she is." The last sentence: "Until she hands it on" is said in silence. And then the same bouncy ball sound with which Moments of Laughter begins, comes on and some reiteration from the first part of this Breathing Room piece for a short while. (Email from Westerkamp to McCartney, October 21, 1998)

Also included in the final moments of this piece is another sound from Moments of Laughter: the child's laughter, which is heard quietly, in the background. Its juxtaposition with the synthesized waltz lends this sound an air of ambiguity as well, perhaps reflecting Westerkamp's concern about her child at this point in her life.

Here, it is important to note that all of the Breathing Room pieces were written at a time when Westerkamp had just gone through a separation from her husband and artistic collaborator, Norbert Ruebsaat, and she was at the same time exploring what the potentials were of this space between them. All three pieces retain a sense of both rupture and continuity. In Breathing Room this is actualized through the coming and going of breath, which as Frances Dyson says "brings the inevitable mortality of the body" close to the voice (1994: 175). In Breathing Room 2, Westerkamp remembers the social rupture between herself and the drunken voices, and transforms this experience of rupture into continuity with the audience, by sharing the performance of this piece with them. In Breathing Room 3, many moments of her family life and personal history are examined in terms of the flow from each moment to the next and its possibilities for her life as well as the experiences of loss and fragmentation.

I began this chapter by discussing Teresa de Lauretis's claim that feminist artists are pulled in opposite directions, towards the positivity of affirmative action and the negativity of social critique. Westerkamp explores this pull in her Breathing Room series, extending the critique and the affirmation, especially in the last piece, to aspects of her personal and family history that few composers would dare to bring to public attention. As she does this, she creates "serious play" (Haraway 1991: 149) that is reminiscent of the antics of a circus clown, both playful and melancholy, personal and political.

1 This strategy was dismissed by one reviewer in a Toronto newspaper, who says that Westerkamp "shapes her Breathing Room with exhalations and hearbeats, a strategy that seems more interesting in theory than in her practice" (Everett-Green 1990: C4). This is the only negative comment made in the entire review, which ignores the only other woman on the compilation by 25 composers, and praises several of the male composers' work as "aggressive," "fiercely protean," or "hefty."

2 Solitudes is the brand name of an extensive series of relaxation tapes and CDs produced in Toronto, Ontario by Dan Gibson. The majority of these productions combine environmental (usually wilderness) sounds with Classical music played on a synthesizer. They are marketed in tourist shops, garden centres, health/New Age shops and record stores.

3 This is possibly (indeed likely) an ironic response.

4 Westerkamp, when reading this chapter, wrote beside these words "Factory?" She says "It made me wonder whether my living inside a factory for the first four years of my life and playing in it for another six or so years had some influence on this: I was playing partially in a most beautiful park-like environment which was part of the factory grounds and partially snuck with my cousins into the machine halls and offices, where we were not allowed to go but had great adventures."

[home](#) [introduction](#) [in the studio](#) [moments of laughter](#) [soundwalking](#) [dissertation](#)