

"This project began in an exploration of the possibilities presented by the theory of continental drift. Newfoundland is one of many unique landforms that represent a composite of other continents, mute evidence of the original Pangaea, the united supercontinent. Part Ireland, part North Africa, part Precambrian shield, Newfoundland's topography echoes geologically distant unities. There must be a point where the three continents meet, if only in our minds. The unfathomable scale of time, space and geophysical forces that mutate the earth's surface rank in our imagination with the music of the spheres. Only by absurd contrast can those sounds be acknowledged along with our own frail and finite nature."

Gordon Monahan has explored the boundaries between music, acoustics and visual art in his many works for piano, loudspeakers and multimedia installation. Known as a composer and performer on the piano, he has also designed several sound sculpture installations, including *Speaker Swinging* (1983), *Long Aeolian Piano* (1984, with Thaddeus Holownia), *Speaker Catapult* (1986) and the recent *Aquaeolian Whirlpool*, exhibited at the New York Hall of Science in spring of 1990. He observes that "kinetic sound sculptures, or automatic performing sculptures, are a viable alternative to musical instruments (traditional or invented) that have to be played by hand. As a performing musician, I have long considered any musical instrument or sound-making device to have a musical life of its own; that is, any musical instrument can be considered a sound sculpture in its own right, one that is induced into performance by the musician who touches it."

MUSIC FROM NOWHERE: BRUSSELS BOY KIDNEY MACHINE SPEAKER
(1989) 23" x 13" x 8"

Empty speaker cabinet, mannequin pis doll, plastic medical container, electric pump, tubing, plumbing parts, coloured water, plexiglas

MUSIC FROM NOWHERE: DRIPPING ROCK SPEAKER (1989)
30" x 19" x 16"

Empty speaker cabinet, sponge rock, electric pump, tubing, plastic parts, water, plexiglas

MUSIC FROM NOWHERE: HIPPIE JINGLE SPEAKER (1989)
19" x 13" x 13"

Empty speaker cabinet, turntable, Chinese exercise balls, plexiglas

MUSIC FROM NOWHERE: VIBRATING PILLOW SPEAKER (1989)
17" x 15" x 10"

Empty speaker cabinet, vibrating pillow, wine glasses, glass, plexiglas

MUSIC FROM NOWHERE: SMITH-VICTOR SPEAKER (1990)
11" x 10" x 10"

Empty speaker cabinet, DC motor with camshaft, lampshade, plexiglas

Monahan comments: "This body of work portrays the loudspeaker as a cultural icon and re-defines its role both socially and perceptually. Loudspeaker cabinets, from the common 70s imitation-woodgrain cabinet to the classic Heathkit-Electrovoice corner-cabinet of the 50s, are transformed into elaborate acoustic sound-producing devices. The actual speakers are removed from inside the cabinets, and the interiors are refinished and rebuilt with mechanical-acoustic sound-producing systems. The speaker cabinets are outfitted with modified water fountains, mechanical vibrators, or motor-driven systems which articulate sustained acoustic sounds. . . . The viewer enters the gallery and sees the loudspeakers in the centre of the room. The illusion is such that the viewer assumes the speakers are playing recordings of sustained sounds. But when the viewer walks past the speakers, the speaker interiors are revealed through plexiglas backings on each speaker cabinet. At this point, the perceptual twist is augmented by amusement or intrigue as the viewer examines the sound-producing systems. . . ."

Bill Napier-Hemy has designed and built stringed instruments, several of which are based on the harpsichord. He has experimented with remote-controlled mechanical action and touch-sensitive actions and has completed a keyboard-controlled bowed instrument, an electric clavichord, a large hammer dulcimer and a large fully chromatic autoharp.

Napier-Hemy has spent fourteen years playing guitar in rock bands, and working as a recording engineer and producer. While working as a recording engineer in New York he was exposed to Medieval European music as performed on replicas of original instruments. The novelty of the sounds and the visual appeal of the instruments led him to begin researching old instruments and designing new ones. In 1988 he was awarded a Canada Council Explorations grant to build and compose for eight new instruments. The *Strumming Instrument* is a refinement of a larger instrument built at that time.

In the fall of 1990 he will study early keyboard instrument construction at the Music Technology Department of the London College of Furniture in England.

STRUMMING INSTRUMENT (1989-90)

72" x 54" x 2"

cedar soundboards, fir structural components, maple pinblocks and bridges, nylon monofilament plectra, .007" steel music wire strings

The *Strumming Instrument* consists of six oblong soundboxes mounted in a wooden frame in such a way that by means of belts, pulleys and an electric motor they can be made to spin on their longitudinal axes. The boxes are fitted with bridges and tuning pins and are strung with music wire. Plectra are mounted in small wooden blocks which are connected to the keyboard by light nylon cords. By depressing the keys the player can bring the plectra into contact with the strings of the spinning boxes, creating a strumming sound. The rate of rotation is controlled by a foot pedal. The range of the instrument is two octaves of chromatic equal-tempered tuning.

Don Wherry is a percussionist, builder of instruments, and the Artistic Director of the Newfoundland Sound Symposium. His first instruments were added to his resources as a percussionist, but later they took on larger proportions. Perhaps the best known of them consisted of a row of resonant metal objects placed under the eaves of his home in Tors Cove. Whenever it rained the house would be filled with sound, from fast to slow, varying in quality with the intensity of the rain. His interest in sound extends to many other art forms, and he has done sound work for film, multi-media installations and theatre.

KADDY'S TRASH GUITAR (1990) 144" x 50" x 36"

aluminium boat, piano wire, large float, turnbuckles, guitar amp, contact microphone

"How it works: Can be plucked, bowed, played upon, sung into.

Further comments: The float is meant to be a resonator, similar to that of a balloon guitar. *Kaddy's Trash Guitar* is a remnant from the Red Lake River, Minnesota, and has had a rough trip to Newfoundland.

Sounds sculpture has always interested me. . . . When I was a kid, I used to assemble or hang objects which produced sounds, unlikely *objets d'art*. I've produced percussion instruments made of sewer pipe, wharf metal, baseball bats, auto parts, and stuff you'd find in a pile of left-overs from a garage sale. Materials include metal, plastic, glass, wood, paper, clay and rock.

I have worked with many visual artists in relation to sound sculpture or multi-media works. Some include Rob MacKenzie, Ron Baird, Don Wright and Frank Lapointe. I have recently shown sound sculptures in the Eastern Edge exhibit *Notions of Environment* which has travelled to several cities across Canada.

There is a wonderful satisfaction which comes from building sound sculptures and musical instruments — the exciting moment when the first sounds are played, then shaped to one's liking — discovering the energy and beauty of sound."

Gayle Young designed and built *The Columbine* in 1977-78 in order to compose and perform music using unconventional tuning systems. The instrument has twenty-three notes in each of almost three octaves. A few years later she built an instrument with twenty-four strings, the *Amaranth*, and she performs regularly on these instruments. As a composer she writes for these two instruments as well as orchestral and electronic instruments. She has also written about music. Her biography of Hugh Le Caine was published in 1989, and she has published several articles on various musical subjects. Since 1987 she has been the editor of *Musicworks Magazine*.

THE COLUMBINE (1977-78) 33" x 67" x 35"

steel keys, brass pegs, nylon cable, maple and cherry wood frame, sitka spruce resonator

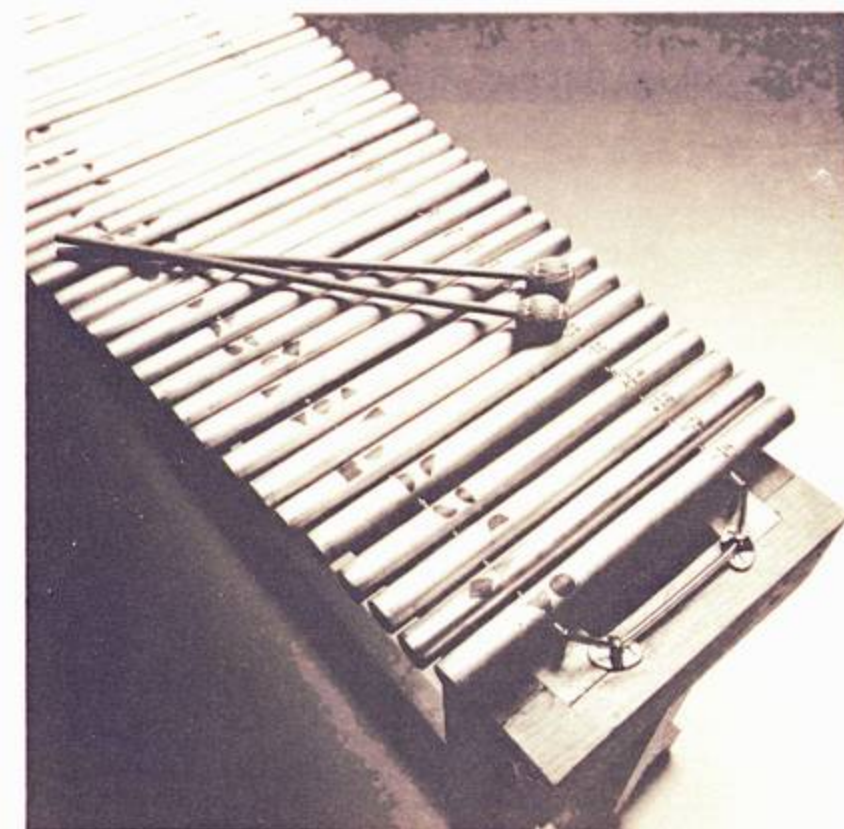
The fractions shown on the instrument show the relationships between the frequencies of the notes on the instrument. The coloured shapes are the means of notating music for *The Columbine*, each colour indicating a different key and each shape indicating the scale degree within each key. The instrument can be played with percussion mallets, or the ends of the tubes can be played with bows.

(All dimensions are listed in this order: height, width and depth.)

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SOUNDS OF INVENTION

curated by Gayle Young



Gayle Young *THE COLUMBINE*

organized by
Memorial University Art Gallery

in conjunction with
Newfoundland Sound Symposium 1990

June 29-August 5
1990

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with a reception to meet the artists on Wednesday, July 4 at 3 p.m.

A group of instruments and sound sculptures is assembled in the gallery. They range in size from small suspended objects to forms larger than a human body. The visitor is drawn into the gallery toward *Music from Nowhere*, speakers in the centre of the room which make curious sounds without human intervention. The visitor passes small chimes made of suspended stones and percussion instruments made of stones laid on stands. How do stones sound? Metal sound sculptures have been made from the byproducts of industrial processes; a large mechanical device made of wood and strings has a keyboard attached to it. Other structures are made of metal pipe, household articles, wire, wood, glass, and plastic tubes. They invite touch. Beside some sculptures are percussion mallets and violin bows, inviting visitors to participate by eliciting sounds from what at first appears to be a visual environment. Soon the sounds made by visitors are added to the sounds of the room.

Looking more closely at the group of sculptures and instruments it becomes apparent that the same materials recur in varying contexts. There is a stone with dripping water in one of the speakers. There are also stone percussion instruments and stone chimes, which recreate the tinkling sound of stones on the beach as waves recede. Water is used in two of the speakers, and also in the *Waterphone* and *Water Drum*. In the *Water Drum* you can see the water that shapes the sound through the transparent plastic tubing. The four different water sounds together make an unusual combination. The wooden keys of the *Boos*, when struck, add another layer of sound. In other instruments wood is used as structural support; in *The Columbine* it is the resonator amplifying the sound of metal tubes. The metal sounding parts of *The Columbine*, *Antenna King* and *Waterphone* all have different effects. Simple metal frames support some of the instruments. Another, *Pangaea*, consists of masses of metal formed into sound generating and sound enhancing structures. Metal strings vibrate, twanging in resonance with the sculpture. Metal parts of various descriptions appear in *Music from Nowhere*, *Water Drum*, and the *Strumming Instrument*. The springs in the *Spring Drum* often shimmer, sounding like electronic reverberation; you play either the springs themselves or the drum heads. Many of these materials were originally manufactured for purposes other than those for which they find themselves used in this exhibition. *Pangaea* uses solidified spills of molten steel. *Kaddy's Trash Guitar* uses a twelve-foot aluminium boat with fish nets and floats. *The Columbine* uses electrical conduit tubing. *Sprong* uses household objects and utensils. The contents of *Music from Nowhere* come from a variety of origins. One of the themes of this year's Sound Symposium is the creative use of industrial materials, a tradition that relates to Italian Futurism, an art movement of the early twentieth century. These newly invented musical instruments and sound sculptures transform industrial products, reconfiguring the materials in such a way as to present new sound resources.

As a visitor to the exhibition moves through the gallery a variety of methods of generating sound will present themselves. All the instruments can be played with bare hands, but can any be played by the breath? Strings can be plucked or bowed; some can be gently struck with percussion mallets. Can metal tubing be bowed? Try drumming, bowing, strumming, blowing. Do the instruments sound the way they look? Do those which resemble one another sound similar? Do any of the sounds change as they are being played? Can you think of a way to change the sound yourself?

The visual appearance of the sound sculptures and instruments will form a path through the exhibition, a path which will be echoed by the sonic environment that is generated as the instruments are played. Rock percussion will be joined by the sustained resonance of ringing metal tubing. The thin wire sound of stringed instruments will be joined by the penetrating sounds of the *Strumming Instrument*, juxtaposed with the continuously sounding textures of *Music from Nowhere*, punctuated perhaps by plastic percussion, a dustpan drum or a glass gong. Perhaps some of the instruments will begin to resonate in sympathy with other sounds in the room. Sounds fill the room. The room becomes a unit, one instrument, one ensemble. A visitor listens not only to the sounds being produced by his or her own action, but also to the other sounds in the room, and to the interaction of the sounds. When there is interaction between generated and surrounding sound there is improvisation. The room of instruments and sculptures becomes a composition of sounds. We commonly speak of *playing* a musical instrument. Many of these designers and builders were playing with sound; they made a playful exhibition. So perhaps we can, in a literal sense, "play" their instruments, and play the exhibition. By extension we play the urban post-industrial environment.

Gayle Young, guest curator, **Sounds of Invention**



Sylvia Bendzsa SPRONG



Gordon Monahan
MUSIC FROM NOWHERE
DRIPPING ROCK SPEAKER

Sylvia Bendzsa can be described as a renaissance woman of the visual arts, having worked extensively in installation and multimedia art, and as a printmaker, most often at the old St. Michael's Printshop on the south shore of the Avalon Peninsula. She has participated in previous Sound Symposiums with her interactive installation *Audible Images* in 1984 and *Marconi: Wizard of Wireless* for which she was visual art director in 1988.

SPRONG (1990) 72" x 54" x 12"
household articles and utensils

An assemblage of household objects, selected on the basis of colour, texture, design and sound, awaits the involvement of the spectator to produce sounds. Presented as an installation, a metaphor and a sound work, it is hoped that through interaction with *Sprong* the viewer may rediscover the known, and enjoy the new vision presented in a lighthearted manner.

Kathy Browning, a multimedia artist, found herself increasingly drawn to collecting "anything that would give a pleasing sound" and quickly gained experience with a large number of materials. She was the producer and director of the group Phenomenon-semble which presented original works combining language and sound. The group performed from 1979 until 1988, and involved writers, poets, and dancers as well as musicians. Many of Browning's instruments were first played in productions of Phenomenon-semble as she explored a range of sound-generating techniques and materials. She comments "It seemed natural to me that music and sculpture should combine to extend each other. It's important that musical instruments both look and sound good. A performance demands that the three dimensional space be considered visually and acoustically."

STONE CHIMES (1979) 22" x 12" diameter
stone, leather

BOOS (1980) 31" x 60" x 24"
wood (imbuya and padouk)

WATERPHONE (1980) 17" x 25"; 8" x 15"
water, stainless steel rod, steel sheets, tubes and bowls

GLASS GONG (1981) 63" x 50" x 24"
glass, leather, metal stand

SPRING DRUM (1981) 81" x 60" x 24"
metal springs, natural skin heads, wood, metal and plastic tubing

LITHOPHONE (1982) 3" x 20" x 10"
stone, rubber tubing, wood frame

WATER DRUM (1983) 8" x 16" diameter
water, plastic tubing, plastic heads, metal rims

NEW LITHOPHONE (1990) 9" x 48" x 18"
stone from St. John's area, wood frame

Browning's waterphones are made from metal resonators filled with water, each with a top, one flat, one rounded. They are played by contact with the rods protruding from the tops. As she describes it: "A waterphone can communicate with dolphins and whales, for they also modulate their voices through water. By creating and playing a waterphone I realized how much you have got to get inside the instrument to really play it . . . you can learn to manipulate the instrument to create a wide range of magical sounds that really get inside you and become spooky."

Browning grew up in Thunder Bay, Ontario, where the rocks along the north shore of Lake Superior consist largely of slate. She found that a lithophone made of slate and set up on logs on the beach had a higher pitch than lithophones using other types of rock. She would sing and chant while watching the powerful and inspiring Lake Superior. For this exhibition she has created a new lithophone exploring a variety of sounds from different types of stone from beaches facing the Atlantic Ocean in the St. John's area.

Bill and Mary Buchen, directors of Sonic Architecture, have built over fifty sonic works, many of them large-scale outdoor installations. Among their indoor installations are a *Sonic Miniature Golf Course* and *Sonic Pinball Games* with built-in samplers. Influenced by Harry Partch and R. Murray Schafer, among others, they describe themselves as "not especially interested in Western music in the Euro-centric sense of the word (classical and rock), but very interested in sound anthropology and technology."

ANTENNA KING (1990) 120" x 120" x 48"
aluminium frame, contact microphone, electronic reverberation and amplification systems

This is the first of a series of technology gods for the information age, referring to communications systems and anthropomorphic forms. It uses imagery from the *US Ranger* satellite that explored the dark side of the moon in 1963. The structure rings freely when gently struck or when the vertical elements are blown into, like panpipes. Bill and Mary Buchen describe some of the influences that led them to the creation of *Antenna King*: "We grew up in Minnesota, a land of prairies, silos and power lines marching like giants along the horizon. The evening and morning stars were the blinking red dots of radio antennas on the horizon. Walter Cronkite was the storyteller, spinning tales of floating orbs launched from earth and going to faraway planets and galaxies . . ."

Michael Burtch had been sculpting in metal for many years when he began making auxiliary sound resources for his percussionist's drum kit in the early 1980's. He used a variety of found metal objects — cast away steel, sheet metal and car parts — that produced interesting sounds when used as gongs or chimes. Since then his metal sculptures have increasingly incorporated the sonic resources of metal.

PANGAEA (1990) 66" x 36" x 24", 300 pounds
steel, strings

The "harp" is a reflection of metamorphosis. It is constructed from select pieces of random spills of molten steel from the Algoma Steel Mills in Sault Ste. Marie — burnt offerings of the local steel plant. These are mounted on a steel resonating tube and base. The piece is described by the artist as more a sound sculpture than a musical instrument: "As a percussionist, strings are foreign to me . . . I have focused on the symbolic and visual aspects of the instrument . . . a torn and scattered Orpheus head still singing, or the victory of the Samothrace, are evoked."



Kathy Browning LITHOPHONE