

INTERLUDE

Island Landscape: Following in Humboldt's Footsteps through the Acoustic Spaces of the Tropics

Daniel Velasco

Only natural scientists are worthy of honor, as they are able to relate and explain the most unusual, the strangest, in terms of its locality, with all its propinquity, and always in terms of its innate elements. How I would love to hear Humboldt speak.

—Johan Wolfgang Goethe, *Wahlverwandschaften*, 1808.

Island Landscape is the title of my audio-visual installation presented June–August 1999 at the House of World Cultures in Berlin, and September 1999–January 2000 at the Kunst- und Ausstellungshalle in Bonn, as part of the exhibition “Humboldt and the Project of Modernism” [1]. The aim of the installation is to sensitize the audience to natural sounds as manifestations of environmental spaces. It uses aesthetic and media-educational concepts as a framework for working with sound in the context of art, habitat and nature.

Humboldt's work offers numerous means for a modern analysis of holistic philosophy and artistic discourse [2]. Humboldt formed in his mind an aesthetic theory of landscape rooted in the interaction of emotional feeling and intellectual knowledge as a mutual reinforcement of artistic expression:

A distinction must be made in landscape painting, as in every other branch of art, between the elements generated by the more limited field of contemplation and direct observation, and those which spring from the force of idealizing mental power [3].

It may be said that Humboldt's ideas relate to more than a new aesthetic concept of landscape art. His ideas and art are the manifestation of the concept of the artist as the highest servant of both nature and human imagination.

The conceptual approach of *Island Landscape* is to confront viewers/listeners with acoustic ecology, sensitizing them to environmental sounds and the need for their preservation. The installation accomplishes this by introducing viewers/listeners to the inexhaustible richness of the natural environment of Cuba (Fig. 1 and Color Plate B No. 2).

The markedly changeable climatic conditions in Cuba produce an incredible variety of natural conditions. This phenomenon and the relative isolation of the island have encouraged the development of a large number of species peculiar to the region. With more than 3,200 species, Cuba has by far the largest number of native plants of any island or island group. The provinces of Holguin and Guantánamo, in the

extreme east of Cuba where the Alexander von Humboldt National Park is located, are the most biologically diverse on the island. Of the 28 forms of vegetation found in Cuba, 16 are in this area, including all three types of Cuban jungle—sub-montane rainforest, needleleaf forest and thorn forest. The jungles are the habitats of rare bird species, such as the Cuban Amazone, the Cuban parakeet and the extremely rare ivory sparrow, and contain the only secure stocks of a native mammal, the Cuban slantbeak. In addition to a wide variety of mammalian life, there is a host of reptiles, amphibians and insects in the region. In the south of the island, the Ciénaga de Zapata (Zapata Swamps) are the second-most differentiated areas of Cuba because of their geographical singularity: Zapata is the largest marshland in the Caribbean. Its 260,000 hectares of swamp and morass have an immense potential for ecologists and for simple lovers of nature. Zapata is the only place in the world where one can find Rhombifer crocodiles or Zapata rails and Zapata wrens, two birds that find their ideal habitats only in these swamps. About 900 species of plants—115 are endemic and five are strictly local—make the Ciénaga of special botanical interest.

My quadraphonic installation includes sonic landscapes recorded in Havana, Trinidad, Ciénaga de Zapata and the Alexander von Humboldt National Park—all areas that Humboldt studied. Installation visitors move through mountains, valleys and planes of sound. They find themselves surrounded by a spatial sound dimension and move in a continuously changing field of sounds, following an expansion of the sound and changes in the tone of the composition from their own spatial and sonic perspectives. The installation immerses the spectator in a sensuous dimension, surrounding her or him with sounds and images, whose fragmented sequence inspire the feeling of entering a space at once real and virtual. The sounds and images projected during the installation revisit Humboldt's explorations at the beginning of the nineteenth century. After reading books about Humboldt's experiences in Cuba [4], I loaded up my digital recording gear and

ABSTRACT

The author describes his sound-image installation *Island Landscape* and its inspirations: the flora and fauna of Cuba and the writings of Alexander von Humboldt. Humboldt was a forerunner of the acoustic ecology movement, which endeavors to preserve and record the natural sounds of environments. Through his vividly written descriptions of the sound landscapes of the New World, Humboldt created a lasting work that continues to inspire artists today.

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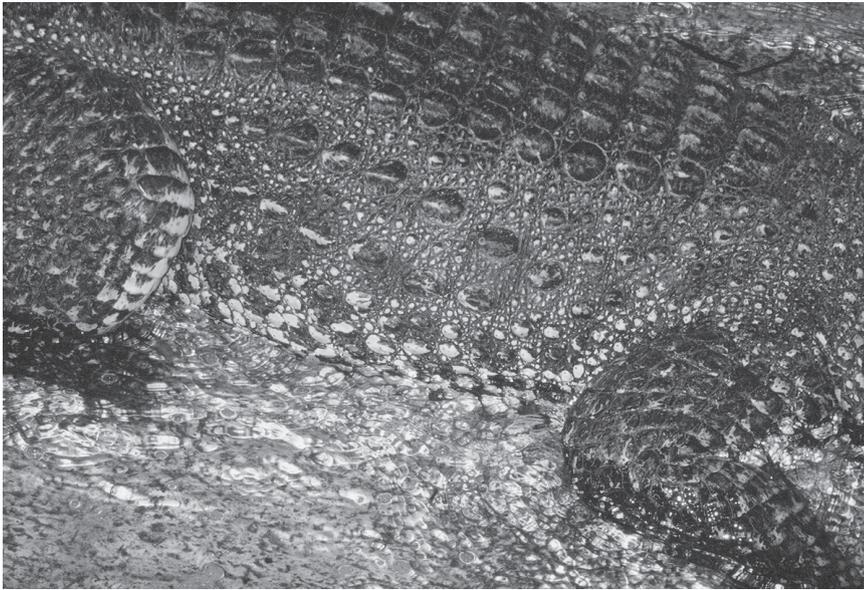


Fig. 1. *Crocodilus Acutus*, Dia projection, 1998. The author shot this image in the Zapata Swamp, Matanzas, Cuba, during his gathering of sounds and images for his installation *Island Landscape*, which was inspired by Alexander von Humboldt's vivid descriptions of the sound landscapes of the New World.

a camera and traveled in December 1998 to Cuba, spending 4 weeks following in Humboldt's footsteps.

HUMBOLDT'S SONIC LANDSCAPES

In 1790, before Humboldt undertook his historic journey to the New World, he accompanied his teacher Georg Forster on a voyage down the river Rhine. During this journey, Humboldt had the good fortune to be introduced to the art of the patient observation and classification of nature. "On our voyage from Mainz to Holland," relates Foster, "we often conversed with plants and stones on the river banks; their language is much more instructive than the fat books and encyclopedias written about them" [5]. From Humboldt's biography we learn that he brought with him into the forests of Venezuela the first literary work of French exoticism, Bernardin de Saint Pierre's *Paul and Virginia*. The last chapter contains a passage that is reminiscent of one of the letters Humboldt wrote during the course of the expedition to his friends and colleagues:

My friend, remember those happy days when we marveled at the sunrise, and the radiant globe shone over the mountain peaks, its beams penetrating our innermost woodlands. An uncountable delight befell us. In our inexperience we wished ourselves all eyes, the better to thrill to the splendid colours, all nose, to enjoy the wholesome scents of our plants and flowers, all ears, to hear

the concert of the birds and all heart, to receive nature's beautiful gifts [6].

This novel undoubtedly had a great influence on Humboldt's ability, further developed by his expeditions, to portray his experiences both sensuously and concretely. He did not simply restrict himself to an exposition of scientific observations as a factual and prosaic topographical description, but described the exotic landscape of the tropics in picturesque, extraordinarily impressive detail and concrete scenery. In his scientific, philosophical, literary and graphic works, Humboldt gives us a realistic picture of the New World (in no way the idealized type of description associated with the travel reports, private journals and certain novels of the late eighteenth century), availing himself of a sensuous exactitude and an unusually sensitive and refined perceptive ability for his time. His literary work succeeds in portraying landscape so comprehensively, exactly and vividly that every sense is awakened, and finally what Humboldt calls "natural scenes" come into being. Therewith he realized his intention "to interpret nature as a whole which is moved and enlivened by inner energy," with "grace and vitality" in a language, of which in 1809 even Goethe in another context said, would rise so above prose that poetry would most likely have to presume to claim Humboldt as one of its heroes.

Especially in his literary work *Ansichten der Natur* (Views of Nature),

Humboldt's ability to describe acoustic perception is striking. The chapters "Nocturnal Animal Life in the Forest" [7] and "On Steppes and Deserts" [8] show his endeavor to establish for the reader that a world of sound with its own specific characteristics exists as an integral part of every stretch of country or region. In compiling *Kosmos: Entwurf einer physikalischen Weltbeschreibung* (Cosmos: Sketch of a Physical Description of the Universe) [9], which was popular science in the best sense of the word, elucidating the importance of "natural science for the enjoyment of life," Humboldt answered the growing interest of his time in portrayals of advances in natural science both understandable by the layman and exact in their details. The second volume of *Kosmos*, which with its description of the effects of nature "on man's inner life" would still find a ready audience today, Humboldt sets out his aesthetic concept of "natural scenes": "The Arabs have a clever figurative saying, that the best description is the one which transforms the eye into the ear" [10]. His portrayal of everything connected to the senses, and particularly to audio-visual perception, goes beyond the literary methods of representing reality used elsewhere in the book. In his way of describing things with regard to their sounds, Humboldt proves himself to be an exemplary scientist, whose way of thinking is influenced by his sense of listening, through which he connects his empirical experience of known parameters to other cultures. Of his visit to the Cunuri River, he writes in his *Reise in die Aequinoctial-Gegenden des Neuen Kontinents* (Voyage to the Equinoctial Regions of the New World),

We bivouacked near Raudal Cunuri. During the night the roar of the little cataract grew noticeably in strength. Our Indians assured us this was a sign of rain. I remember that the inhabitants of the Alps also put great trust in this manifestation of the weather. Both the people of the Alps and of the Andes confirm in this case that it will rain because the waters sound nearer. And indeed it did rain shortly before sunrise. Incidentally, the Araguato apes [howler monkeys], with their continuous melancholy cry, had announced the coming downpour much earlier than the amplified roaring of the waterfall [11].

HUMBOLDT EFFECT

Humboldt's scientific writings include a work specifically concerned with sound. He had frequently noticed that the

“roar” of volcanoes and the deafening noise of the Orinoco waterfalls sounded much louder by night than by day. He also noted that the wild cries and disturbances that raged all night made sleep impossible. Among the many unusual phenomena he observed, the effect of sound circulation at night especially concerned him. This is the so-called Humboldt Effect, which the physicist Hans Ertel expounded before the Academy of Sciences in Berlin in 1955 in a work entitled “A Problem in Meteorological Acoustics—Variation in Sound Intensity According to the Time of Day” [12]. Humboldt analyzed the causes of the phenomenon in a lecture for the Academy of Sciences in March 1820 in Paris, “Sur l’accroissement nocturne de l’intensité du son” (“On the Increase in Sound Intensity at Night”), in which he describes the empirical observations made during his voyage,

The inhabitants of Atures and Maypures, whatever the missionaries may have asserted in their works, are not more struck with deafness by the noise of the great cataracts, than the Catadupes of the Nile. When this noise is heard in the plain that surrounds the mission, at the distance of more than a league, you seem to be near a coast skirted by reefs and breakers. The noise is three times as loud by night as by day, and gives an inexpressible charm to these solitary scenes. What can be the cause of this increased intensity of sound in a desert, where nothing seems to interrupt the silence of nature?

The velocity of the propagation of sound, far from augmenting, decreases with the lowering of the temperature. The intensity diminishes in air agitated by a wind, which is contrary to the direction of the sound; it diminishes also by dilatation of the air, and is weaker in the higher than in the lower regions of the atmosphere, where the number of particles of air in motion is greater in the same radius. The intensity is the same in dry air, and in air mingled with vapours; but it is feebler in carbonic acid gas, than in mixtures of azot and oxygen. From these facts, which are all we know with any certainty, it is difficult to explain a phenomenon observed near every cascade in Europe, and which, long before our arrival in the village of Atures, had struck the missionary and the Indians [13].

In reference to the importance of sound in Humboldt’s work, four reference categories can be drawn up: (1) hearing sounds, (2) remembering sounds, (3) sounds themselves and (4) silence. Below are examples, within these categories, of a few of the 40 sonic landscapes and acoustic phenomena

Humboldt observed and analyzed in *Reise in die Aequinoktial-Gegenden*.

Sonic Landscapes

Humboldt wrote in the Caripe valley:

In the midst of such tremendous surroundings we are inwardly at peace. Moreover, amidst the loneliness of these mountains one is less amazed by all the new impressions one receives with each step, than by the fact that the most differing climates have so many features in common. On the hills against which the monastery leans there are palm trees and giant ferns, and in the evening, when the sky hints at rain, the monotonous cry of the red howling monkeys sounds across the air, as it might be the wind’s distant roaring in the forest. But despite the familiar sounds and the strange shapes of the vegetation, and all of these marvels of a New World, wherever he may be, nature causes man to hear a voice that speaks to him in familiar tones [14].

Underground Sounds

Humboldt wrote about an earthquake in Cumaná:

More than four fifths of the town were completely destroyed, and the tremor, which was accompanied by a powerful underground roaring, was equivalent, as in Riobamba, to the explosion of a charge laid at great depth. . . . In Cumaná it is said that the most devastating earthquakes are announced by a faint vibration of the ground and by a rushing sound, and that people used to such occurrences never fail to notice these signs. The underground roaring that is a common occurrence with earthquakes does not usually have a direct relationship to the strength of the tremors. In Cumaná it always precedes them, while in Quito, and recently also in Caracas and the Antilles, a thundering as of heavy artillery fire was to be heard long after the tremors had ceased. A third class of such manifestations, and the strangest of all, is the underground thundering which continues for months on end, without the slightest vibration of the ground being perceived [15].

Sound Memories

Humboldt wrote on Cocollar summit:

Nothing can be compared to the impression of majestic calm that the spectacle of the nocturnal firmament in this lonely place affords. As we looked out, with the onset of night, across the prairie, which stretched away towards the horizon, and over the green, softly undulating plateau, it was as if, just as on the steppes of Orinoco, we might behold the starry dome of the sky resting above the ocean. The tree beneath which we sat, the luminous insects dancing with desire, the shining southern constellations, all this reminded us how

far we were from homely soil. And if in the midst of this unfamiliar landscape the ringing of a cowbell, or the bellowing of a bull, reached our ears from without a gorge, then all at once the thought of home arose within us. It was as if we had heard voices from far, far away, that called down towards us across the ocean and transported us by a magic power from one hemisphere to another. How wonderfully agile is man’s power of imagination, that eternal source of his delight and merriment [16].

Periods of Silence

Humboldt wrote on the stillness at midday in the forest:

What a profound impression does the noonday silence make in these hot latitudes! The forest animals hide themselves within the thicket, the birds slip between the leaves of the trees or cracks in the rocks. But if one listens into the apparent deep silence for the quietest sounds the air bears to our ears, one hears a muffled whirring, a deadening buzzing and humming of the insects, with which all the lower aerial layers teem. Nothing can more vividly reveal the extent and power of the organic realm. Myriad insects crawl upon the ground or flutter about the sun-dried vegetation. A turmoil of sound can be heard from every bush, from rotting tree trunks, from cracks between the rocks and from the ground, through which lizards and centipedes and cecilians burrow. As many voices call to us that all of nature is breathing, that life prevails in a thousand forms in the dusty, furrowed earth, as do so from the bosom of the sea and from the air which surrounds us [17].

Acoustic Ecology

Every place has its own distinctive sound picture, supplementing our own personal history, our social history and that of the world in general with important information. These characteristic sounds form “areas” of unique importance, in that a particular place has its identity not only in terms of geography or physical-temporal aspects, but also in its acoustic properties. On hearing, re-hearing or remembering them, we feel a deep sense of belonging. The discovery of these sounds, their recording and protection, is the work of an emergent school of thought called acoustic ecology.

As the sonic environment comes to be considered worthy of study and contemplation rather than simply noise pollution research, and its significance to the historical and ecological record and the evolution of human life becomes evident, then the landscape involved, whether valued primarily for natural or for cultural attributes, acquires cultural significance. The World Forum for Acoustic Ecology

(WFAE) arose as a scientific, artistic and educational movement led by Canadian researcher R. Murray Schafer, who has been developing the concept of the “New Soundscape” since 1969 [18]. According to composer and founding member of WFAE Hildegard Westerkamp,

Soundscape ideology recognizes that when humans enter an environment, they have an immediate effect on the sounds; the soundscape is human-made and in that sense, composed. Soundscape is the acoustic manifestation of “place,” where the sounds give the inhabitants a “sense of place” and the place’s acoustic quality is shaped by the inhabitants’ activities and behaviour. The meanings of a place and its sounds are created precisely because of this interaction between soundscape and people [19].

Humboldt undoubtedly is the unrecognized forerunner of this movement. Just as his visual recordings, his landscape drawings and botanical illustrations, inspired many artists of his day (Frederic Edwin Church, Ferdinand Bellermann and Johann Moritz Rugendas), so do his descriptions of sonic landscapes today impress us in their vivid reality, as his language took the place of the tape recorder in conserving sounds. To him, the tropics were truly phenomena of nature on a grand scale and he believed they could show Europeans the diversity and splendor of nature if suitable impressions of them were transmitted through writing. From his writings emerged a number of images that express the striking distinctiveness of a region dominated by incessant sound activity except during the apparent stillness of noon. Humboldt possessed a highly refined sense of listening and left behind a magnificent testimony of the places he visited. Humboldt’s endeavor to portray sound as a specific characteristic of a re-

gion shows a great interest during his voyages in “sonic landscapes,” as well as his desire to describe silence or moments of stillness. This appreciation came from a combination of scientific curiosity, the novelty of the torrid zone, aesthetic delight and the philosophical questions that arose from observations of the relationship between people and nature in the New World.

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Daniel Velasco was born in 1958 and studied Image and Sound at Düsseldorf College. He has been creating radio plays and radio art programs for the Westdeutscher Rundfunk (Broadcast Station) in Cologne, Germany, since 1985. Velasco has produced electronic music works by Stockhausen, Eloy and Hoeller at the WDR Studio for Electronic Music. In Mexico he has lectured extensively on radio art at the University Claustro de Sor Juana in Mexico City. Since 1999 he has curated the concert series “Hearing” for the Stadtgarten in Cologne. In 1999 he directed the soundscape-theater production “Humboldt & Bonpland” at the Ifa-Gallery in Stuttgart and the Alte Feuerwache in Cologne. He has been a producer of and artist in acoustic art and electronic music festivals in Germany, Holland, Spain, South America, the United States and Mexico.