

WFAE 2011 PAPER SESSION (8): 'Soundscapes and Sound Installation Art.

Thursday, 6/10/2011-- 09:15-10:30 -- Ionian Academy, Corfu

*Session Chair: Jay Needham**¹

Title of Presentation: *“Listening to the Audience, Engaging the Audience: A Multi-disciplinary Approach to Sound Installation Art.”*

Abstract:

Sound installation art is an emerging form, its conventions undefined. Artists venturing into this medium are often well-versed in cutting-edge technology but unfamiliar with techniques for engaging audiences. Artists experienced in static, silent mediums come to sound installation with little appreciation for its tendency to “bleed”, unaware of the aural invasion’s impact on the environment and the behavior of those within it. Artists accustomed to presenting in theaters (e.g. live performers and filmmakers) are used to audiences with feature-length attention spans. As a consequence, they frequently create lengthy pieces that fail to capture the imagination before their intended audience has walked away. Even more unfortunate is the “installation” that relies on a CD player and a pair of headphones hung on a gallery wall. Inevitably the piece preaches to the choir, heard only by the rare, truly dedicated visitor (usually another sound artist).

In a non-theater setting, it is difficult to put a frame around one sound and declare that it is art, separate from all other sounds. Because sound installations become part of an existing soundscape, they are easily ignored by audiences overwhelmed by noisy environments. Creating for galleries and public spaces means courting the consent of the audience: the art must cut through the noise to inspire a normally-transient audience member to linger and actively listen. A successful installation must exist in relation to its soundscape, working with audience behavior instead of against it.

I’d like to present my approach to sound installation art in the form of a paper. First, I will define the need for an audience-centered approach by discussing examples of installations that failed to engage an audience or, worse, alienated it. I will then discuss how to identify potential obstructions to audience engagement by conducting observational research prior to creating the art. This involves “listening” to the site: addressing important questions about the site’s soundscape, and the behavior of the people in it. I will then discuss how principles from fields like acoustics, product design, and marketing can be applied to these observations to identify techniques that treat the existing environment as a foundation, instead of an obstruction. I will conclude with examples of these principles in use: sound art pieces that successfully engage audiences. I intend to demonstrate that creating meaningful work in this medium requires understanding the relationship between the audience and the site.

AUTHOR

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¹**Jay Needham** is a sound artist, electro-acoustic composer and scholar. His compositions activate listening as an irreplaceable component of an artistic cognitive process. His collaborations with grass roots organizations such as the, Asociación Panamericana para la Concervación have increased awareness of the importance of natural places and disappearing soundscapes around the planet. His recent residency in Antarctica aboard the MV Antarctic Dream has resulted new series of sound sculptures titled *South Polar Suite*.

Title of Presentation: *“Tribalism and local structures in a music and video installation.”*

Abstract:

In a world of globalisation, where economic borders are suppressed whilst national and racial barriers are erected higher, the notions of tribalism and tribal behaviorism remain as dominant and indicative as always. Although tribes no longer exist, in the western world, these notions are nowadays related to groups, such as political or athletic associations, economic factions, trade-union organisations and professional guilds, religious teams, social networks on the Internet, etc. These groups often have simple structures with few significant distinctions between their individuals.

Tribalism describes the loyalties that individuals feel towards their group/tribe and the way these loyalties affect their behavior and their attitudes towards others. It also refers to the strong cultural identity that characterises oneself as a member of one group/tribe. These characteristics shape the tribal consciousness and loyalty to the tribal values and to the customs and beliefs of a tribal society. Each time a tribe is in danger of corruptive influences from external sources (other tribes), these values provide for strategies of defense.

This paper describes the strategies and methodologies for creating and evolving local structures in a music and video installation. The fundamentals for creating these structures derive from the application of basic tribal rules. The installation – whose mechanism is developed in MaxMSP - consists of four sound groups, which will be referred to as tribes. The first three tribes reproduce a recorded saxophone sound, whilst the fourth tribe reproduces a recorded voice. Each tribe has its own local/tribal rules and values, as well as mechanisms for defending its identity from external invasions. An external invasion is defined as an attempt of a tribe to degenerate the local sonic parameters of another tribe. The local rules and values of each tribe are related to sonic parameters, such as amplitude, playback speed and panoramics. At a higher-level structural order, numerical values and attributes are binded to and influence different parameters, which control the overall sound transformation and the playback speed of the video. Thus, a self-evolving network of tribes is created, in which each tribe adjusts its structural development according to external influences and its own limitations. At the highest structural level, a time machine controls the temporal development of the installation by producing cycles of predefined durations. Through successive cycles, the tribes evolve influencing both music and image.

AUTHOR

Lotis, Theodoros, Department of Music, Ionian University.

Theodore Lotis studied the guitar, flute, music analysis and composition in Greece, Belgium and the UK. He has completed a PhD in Music at the City University in London (England, UK) thanks to grants from the British Academy (Arts and Humanities Research Board), and the Foundation AS Onassis. Having produced several instrumental works and collaborated with artists from various disciplines (dance, theatre, video) his current endeavours in music are focused on spectrum, timbre, sonic space and light. His music has been performed at festivals and conferences in Europe, Australia, America and Asia. Theodore Lotis has been teaching electronic music composition at Goldsmiths College, University of London (2001-03), Technological and Educational Institute of Crete (2003-04) and the Aristotle University of Thessaloniki (Greece, 2004-05). He is currently lecturing at the Ionian University (Corfu, Greece). He is founding member of the Hellenic Electroacoustic Music Composers Association (HELMCA) and the Hellenic Society for Acoustic Ecology.

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Title of Presentation: *“Fragments of Extinction: Acoustic Biodiversity of the World’s Primary Equatorial Rainforests.”*

Abstract:

This presentation will focus on elucidating the basic concepts underlying the multi-annual environmental sound-art project *Fragments of Extinction* followed by a travel report of the field recording research trip in the african equatorial primary forest and an introduction on the key concepts of the eco-acoustic composition *Integrated Ecosystem* presented at WFAE 2011.

Fragments of Extinction aims to capture fragments of sonic habitats of the three world’s principal areas of primary rainforests along the equator (The Amazon, Central Africa, Borneo), where the most ancient and intact ecosystems still thrive today. It is along the equator that days and nights are equally long during the whole year, and where natural rhythms and circadian cycles are most regular and in balance.

Experimental cutting-edge 3D microphone systems were installed in these soundscapes, recording throughout the entire day-night cycle. These data are preserved as evidence of acoustic biodiversity and as reference for further research on the dynamics of niche segregation in the old-growth environments. The recorded sounds are being presented to museums and music venues around the world, and played in their pure unaltered form, and as electroacoustic musical compositions for sound art installations. The result is one of the most vivid and dramatic ecosystem portraits available for spherical three-dimensional reproduction, one that is also downgradable to planar multichannel- and regular stereo systems. The project is envisioned as a vehicle for raising public awareness of the serious environmental issues that relate to the fate of primary tropical forests and the extinction of species in this habitat. Following a pilot project in the Amazon (2002) and a trip with full technology in Central Africa (2008), the next step in the project is field research in Borneo with a new technology.

AUTHOR

Monacchi, David, Professor, Conservatory of Music of Pesaro, and Adjunct Professor at the University of Macerata - Italy.

Monacchi’s primary research focus is recording natural sonic environments and untouched ecosystems throughout the world with cutting-edge field recording techniques to create music for sound installations, museums, and experimental and new music concerts. For nearly two decades, he has recorded in Europe, Africa, North and South America, and used the recordings as material for creating eco-acoustic compositions that are being performed around the world in more than 180 events over the past few years. His honors include the “Erato Farnesina” fellowship for the World Soundscape Project – Vancouver in ‘98, the “Fulbright” Research for the CNMAT at University of California – Berkeley in ‘07, and prizes from the “Russolo-Pratella” competition (Italy), “Locarno Film Festival” (Switzerland), “Multiple Sound Festival” (Holland) and recognized twice at the “Bourges International Grand Prix of Electroacoustic Music” (France), and important collaborations with contemporary artists and directors as Mimmo Paladino, Kristin Jones, Lavinia Currier. His music is published by Ants Records, Domani Musica, Coclearia (IT), Wild Sanctuary and EMF Media (USA). Currently he is professor of Electroacoustic Music at the Conservatory of Music of Pesaro, and adjunct professor at the University of Macerata - Italy.

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Title of Presentation: *“Interactive Sonic Chimerae.”*

Abstract:

This paper investigates the formation of virtual sonic "chimerae", that is artificially cross-breed sounds from three different and contrasting environments: The song of Weddell Seals from the Antarctic, the song of Swallows from Corfu, Greece, and the recorded

sounds of Numbers Stations (Short wave radio transmissions of encoded espionage messages). Different approaches for the segmentation of the recording samples and the automatic classification of their acoustic features are discussed, including a variety of onset-recognition techniques as well as psychoacoustically oriented features such as MFCC and spectral centroid. The data extracted from these samples are organized in a way as to permit their re-grouping in real time according to dynamically configured sets of characteristics. A system is demonstrated for the "interbreeding" of sound samples in such a group, so as to produce new sounds which display a selection of characteristics from different categories. The interbreeding is realized by spectral manipulation techniques using FFT as a basis, as well as variations of granular synthesis and concatenative synthesis. The purpose of this artificial hybridization is to metaphorically explore the idea of cultural and environmental adaptation between sound worlds belonging to different worlds. The idea behind this work is related to Alvin Lucier's "Quasimodo, the great lover", and it's novel realization by Cameron and Rogalsky using birdsong (2007, <http://so-on.be/?id=844>), except that here the idea of transformation is taken one step further: The objective is to explore the possibilities of mutation and "morphing" offered by psychoacoustically founded signal processing techniques, using both interactive techniques and simple evolutionary algorithms. Tools for the visualization of the features will be presented, including the superposition of feature parameters on the spectrogram of the sound and the 2 and 3d projections of multidimensional scalings of feature sets. As means of interaction, a multi-touch surface with fiducials as well as direct finger position recognition is used. In this work, the listener is asked to form their own "listening paths" which cross between three acoustic worlds. The crossing is done by moving virtually between the worlds via the multi-touch surface interface, thereby also prompting the "contact" between those worlds. This contact triggers mutual adaptations of sonic characteristics between the "inhabitant-samples" of the worlds, which may then take on their own dynamic.

AUTHORS

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- Bezas, Aris, Doctoral Student, Ionian University.

Ioannis Zannos is Associate Professor of Computer Music and Interactive Media Art at the Department of Audiovisual Arts of the Ionian University. He holds degrees in Composition, Musicology and Information Science. He has experience both in live electroacoustic music and in media arts.

Stratos Kountouras holds a Bachelor degree in Broadcasting and Multimedia, a Masters in Music and Studio Composition and a Masters in Computer Science. He is currently writing his PhD Thesis at the Department of Audiovisual Arts of the Ionian University. His topic is a system for audiovisual interaction combing multitouch surfaces with free-hand gestures.

Aris Bezas has a degree in Machine Engineering from the Aristotle University of Thessaloniki. He is currently writing his PhD Thesis at the Department of Audiovisual Arts of the Ionian University. His topic is a real-time graphics synthesis engine for artists.

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Title of Presentation: *"An Interactive Windscape"*

Abstract

This paper presents the definition phase of a project dealing with the ontological

significance of the phenomenon of air and wind, and its auditory manifestations. The goal of the project is the creation of a digital installation that combines recorded and simulated sounds of air movement and wind with graphic representations of climate and geographical data. The sources for the installation are recordings of wind and air movement as well as geographic and environmental data whose sources are both offline and in real-time sources accessed via the internet. Its form is that of a constantly changing soundscape combined with multiple graphics projections. The objective is to envelop the visitor in a web of sound that invites him to "harmonize" his or her own movements with it and to influence its course, thereby entering into an interactive relationship with the environment. The background research for this project is developing along the following axes:

1. Study of the semantic, scientific and cultural significance of air movement and wind. This starts with an investigation of references to winds and wind phenomena in mythologies world-wide, and extends over the first scientific or causal explanations of the wind as air movement in ancient Greek thought to more recent literary references. The intention is to create a semantic web which will serve as guideline for drafting the structural outline of the installation. One important source for this work is the work of Ioannis Troumbis (2003. "The History of Nature. The Ecosystem of Civilization in early Ancient Greece.").

2. Identification of data sources and collection of data material for the installation. The search starts with well-known international sources of geographical information such as the Earth Science Data Interface at the Global Land Cover Facility (<http://glcfapp.glc.f.umd.edu:8080/esdi/index.jsp>) and the World Data Center for Meteorology National Environmental Satellite, Data and Information Service (<http://www.ncdc.noaa.gov/oa/wdc/index.php>).

3. Algorithmic simulation of air movement and wind sounds. This involves both algorithms simulating physical phenomena (flow simulation, particle movement and collisions, simulation of turbulence) and algorithms designed empirically and iteratively "by hand" that mimic the sound of wind.

4. Interaction Design. The objective of the interaction is to involve the visitor in the navigation of semantic and sensual space that has its own quasi-mythical structure (see Claude Levi-Strauss).

We will discuss progress made in the identification of sources and present some interaction and wind simulation prototypes.

AUTHORS

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Tania Tsiridou has a degree of Sociology from the University of Cologne and a Masters in Digital Art Forms from the Athens University of Fine Arts, She is currently teaching Video at the Department of Audiovisual Arts of the Ionian University.

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