

WFAE 2011 PAPER SESSION (2, 3): “Soundscapes of the Past and Beyond.”

Monday, 3/10/2011-- 16:30-17:30 & 17:45- 18:45-- Ionian Academy, Corfu

Session Chair: Nigel Frayne*¹

Title of Presentation: *Towards a Theory of Sonic Museological Design.*

Abstract:

The traditional image of museum as a peaceful, monumental institute, where cultural heritage is preserved and presented in an uncontested way to be worshiped, is being abandoned little by little throughout the world. The fulfillment of the educational and entertaining role of the “new museum” should be achieved through active and interactive ways of learning which guarantee that the visitor will be touched and finally acquire a complete museological experience. Such an experience evolves in a fine-tuned dynamical museological scene where time and space unfold while the visitor wanders among exhibits.

Apart from few exceptional innovative projects carried out by sound designers and engineers, common uses of sound in museums -if there is any at all- involve segmental approaches far away from the idea of a holistic soundscape design. The fact remains that both museological theory and practice unexpectedly lack the dimension of sound. What is really missing is a sophisticated soundscape design adapted to both architectural and museological planning and design to provide a holistic communicational framework of reference for the exhibits, where each element of the design should contribute to establish a functional entity. Unique acoustic and psychoacoustic features of sound as well as technological maturity in creating and controlling complex networks, sensor based sound installations and interactive interfaces but mostly the understanding of how soundscape functions -in terms of acoustic orientation, semiotics and symbolism, realistic representation, contextualization and multiple interpretations, balance, silence, narrativity and verbal information, rythmology etc-, impose Sonic Museological Design as an integral part of the “new museum”.

In the process of my PhD research all the existing knowledge and experience around the fields of Soundscape and Museology is being gathered to form a theory of Sonic Museological Design along with an expanded model of methodology to be incorporated in both museological and soundscape synthesis studies. This theory will be outlined in a multidisciplinary framework of certain refined principles driven from various fields such as museology, acoustic communication, mass communication, semiotics, acoustics, psychoacoustics, education theory and music aesthetics. Furthermore, museological studies should be reformed to include soundscape designers in their courses of study. The endmost purpose of my research is to establish a new field of expertise, that of soundscape designer–museologist by analogy to architect–museologist, archaeologist–museologist or museo-educationist. This new expert should be placed in the core of museological team to ensure the communicational success of any museological project.

AUTHOR

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Mikis Zisiou finished his studies as a mechanical engineer at Aristotle University of Thessaloniki in 2004. In the same year he was awarded his diploma in Classical Guitar from New Conservatory of Thessaloniki. He

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continued his studies at the department of Musical Studies at Ionian University where he graduated as a composer and went on to finish his masters' degree in "Sonic Arts & Technologies" in 2008. He is a member of Electroacoustic Music Research and Applications Lab (EMRAL) and a doctoral candidate in "Sonic Museological Design".

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Title of Presentation: *"The Sounding Museum: The Way of the Mask."*

Abstract:

By analysing the soundscape we can learn about the ramifications of nature and culture. This holds especially true for societies in which oral literacy is traditionally held in high value. The indigenous peoples of North America deserve our full support in safeguarding and preserving their long suppressed heritage.

The Sounding Museum investigates the potential of cultural soundscape production for art, research and education in the museum. With the Sound Chamber at the NONAM, the multi-channel composition "Two Weeks in Alert Bay", and the clearaudience workshops built around these tools, first steps have been taken to bring the intangible cultural heritage of the indigenous cultures of the world to the museum visitors.

The new joint project of the Sounding Museum and the MOA on the Pacific Northwest Coast will follow the self-evident path of respect, working with musicians, artists and representatives from the Kwakwaka'wakw communities of BC. It will also follow the Way of the Mask.

From picking the right cedar tree the mask will be cut from over the carving process to the ceremonial use of the mask at a potlatch, the most important festivity in Northwest Coast cultural life, all steps will be meticulously documented. A whole squad of microphones will record all the sounds emanating from the respective events and activities, but also interviews, songs, and other relevant material, thereby assembling an acoustic portrait of one of the core aspects of contemporary Kwakwaka'wakw cultural identity.

The idea is to establish a collaboration with a carver who we will accompany working on a transformation mask, next to the well-known crest poles one of the trademarks of Northwest Coast artistic activity. The audio footage will be used at the MOA over the coming years in form of little interventions into the yet mute exhibition space, culminating in a special exhibition that will feature the transformation mask itself (as a loan from its owner) at the centre of a setup with a multi-channel soundscape composition and visual documentary material in 2015.

This paper will focus on the deer transformation mask carved by master carver Beau Dick for Chief Bobby Duncan, who wore it at his potlatch in Campbell River in October 2009. Audio recordings and photography from the carving process and the potlatch taken during field work for the "Two Weeks in Alert Bay" production will be used to illustrate the potential of the future project "The Way of the Mask"

AUTHOR

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Hein Schoer works as researcher and lecturer at Fontys School for the Arts in Tilburg, NL, and teaches on soundscapes and acoustic ecology at Hochschule Darmstadt. He has a history in audio engineering and cultural science, and writes and composes conventional music as well as acousmatic pieces. In collaboration with Maastricht University and NONAM (Nordamerika Native Museum, Zurich), his PhD dissertation "The Sounding Museum" covers theoretical and practical aspects of the mediation of North American indigenous cultures by means of soundscape composition, namely representation issues and best practices when in the field, in the studio, and in the museum itself.

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Title of Presentation: *“The silence within Melidoni cave in Crete.”*

Abstract

In this paper a preliminary research on the acoustic environment of Melidoni Cave is presented while assumptions and questions on the possible use of sound and silence within it are discussed.

The Melidoni Cave (Gerontospilios or Gero-Spilios) lies twenty-eight kilometers E-SE of the city of Rethymno and another 1800m from the village Melidoni, at a height of 220m on the southern slopes of Mt Kouloukonas in the lower Mylopotamos valley. The Cave has been attracting people, according to the results of the excavations by Yannis Tzedakis and Irene Gavrilaki, since the middle Neolithic period (6000 BCE) and constituted a religious center for worshipping a female deity from the Middle Minoan (ca 2160 BCE) until ca 500 BCE and Hermes from ca 100 BCE, if not earlier.

Engravings on the Cave's walls have started to appear from c. 100 BCE until today and they follow more or less the same pattern: the name of the visitor and the date and in a few cases the reason of the visit. In a number of texts engraved in the innermost Inscriptions Room the presence of the verb προσκυνώ without an object is astonishing, because it implies a kind of worship and its instances in the epigraphic record in such a context are relatively few (mainly in Egypt and Asia Minor). Although what the persons who engraved this verb were worshipping is omitted, to them it was easily understood and self-evident. They knew very well what they worshipped and to what they made a pilgrimage. Each one of them inside the innermost Inscriptions Room of the Melidoni Cave saw, heard, sensed, experienced the divine, but, at present, it would be presumptuous to argue what divinity this was.

This puzzle has led to the exploration of other avenues of research, among which the acoustic ecology of the Cave's interior, on the expectation that tangible evidence may result to hypotheses about the pilgrims'/visitors' attraction to the innermost Inscriptions Room and especially about the kind of worship there.

Remarkable results as to the acoustics of the Cave's chambers from one level to the other deeper one have yielded, concerning the background noise levels and the reverberation time. The most intriguing fact is the very low reverberation time of the innermost Inscriptions Room, which at some frequencies is equivalent to this of an anechoic chamber. (a chamber of high sound absorption). The reverberation time of the chamber was performed through impulse response measurements. The excitation was made by hand clapping. It must be mentioned that it was difficult to use large and more proper acoustic equipment, especially in the deeper chamber. Although the reverberation time values are indicative, they still are worthy to mention. In both chambers, the reverberation time values suggest good speech intelligibility (1.1s and 0.4s for 500Hz for the upper and deeper chamber respectively).

We hypothesize that these acoustic conditions of the innermost Inscriptions Room have been used as an important conditioning element of the worship.

AUTHORS

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Eirini Gavrilaki (eigavrilaki@gmail.com) has received her B.Sc. in History and Archaeology from National and Kapodistrian University of Athens and her DEA in History of Art and Archaeology from Université Paul-Valéry,

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Spyros Brezas (brezas@staff.teicrete.gr) received his Bachelor in 2005 from T.E.I. of Crete, Department of Music Technology and Acoustics, Greece. He received his M.Sc. in Sound and Vibration Studies from University of Southampton, Institute of Sound and Vibration Research (ISVR) in 2006. The title of his thesis is "Uncoupled violin mobilities by inversion". Since 2008, he works at T.E.I. of Crete, Department of Music Technology and Acoustics, Greece, as a teaching associate. He is a member of the Hellenic Institute of Acoustics (HEL.IN.A.) and Audio Engineering Society (A.E.S.).

Katerina Tzedaki (tzed@otenet.gr, tzed@staff.teicrete.gr) is a composer of electroacoustic music. She received her MA in Music Composition from the Music Department of City University, London and she is a PhD candidate in Electroacoustic Music Composition in Music Technology & Innovation Center of De Montfort University, Leicester, UK. Since 2003, she works as a teaching associate at T.E.I. of Crete, Department of Music Technology & Acoustics. She is a founding member of the Hellenic Electroacoustic Music Composers Association and of the Hellenic Society for Acoustic Ecology.

Yannis Z.Tzifopoulos (tzif@lit.auth.gr, <http://www.lit.auth.gr/en/node/296>), studied Classics at the Aristotle University of Thessaloniki (BA 1983), The Ohio State University (MA 1985), New York University (1985-86) and The Ohio State University (PhD 1991). He taught at the University of Crete (1994-2007), and since 2007 he is Associate Professor of Greek Literature and Epigraphy at the Aristotle University of Thessaloniki. His research interests include Greek and Latin Epigraphy, historiography, iampos and Greek comedy, Sophocles, Pausanias and the second sophistic, Greek, Latin, and Modern Greek paroemiology and folklore.

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Title of Presentation: *"Motion in Place: Sounding Spaces, Movement, Affect and Technologised Mediation."*

Abstract

This paper discusses an AHRC-funded interdisciplinary project being undertaken by researchers at the Universities of Sussex, Bedford, Reading, King's College London and FEUP/INESC Porto. The Motion in Place Platform project is developing methodologies and tools to articulate the human experience of moving through place. As such it explores an often bracketed liminality that resides between material environments on the one hand and immaterial cognitive and behavioural processes on the other. A key technology used by the MiPP team is motion capture and we have been developing multi-channel movement recording suitable for use in the field. Two comparative case studies are discussed to illuminate the scope of the project.

The first example presents mocap recording and a 6-channel soundscape captured during the University of Reading's Archaeological Field School (Summer 2010). The MiPP team documented this activity of a large group of archaeologists excavating an Iron Age/Early Roman site at Silchester, Hampshire. A multitude of gestures, both sonic and kinaesthetic are documented, presenting an excess of human/human and human/world interactions. A key question for us, and one generated through the inter-disciplinary nature of the project, is how these recordings may be interpreted as usable data within a framework shaped by the conjunction between experimental archaeology, informatics, critical theory and soundscape studies.

The second study documents a listening-in-movement experiment which investigated how an abstract space/place (an interactive sound installation) may be explored. Conclusions reached were derived from 5 subjects' interactions with the installation environment (captured by binaural microphones, inertial mocap data and video) and supported by interview transcriptions. How, within a controlled environment, does the addition of recording technologies modify a subject's internal and external movements?

The paper builds upon the sensory reaching out to the material environment

established by soundscape studies and expands upon this from the perspective of subjectivities in motion. It gains its theoretical context from an inter-disciplinary nexus involving the disciplines introduced above and the proximate fields of contemporary dance, anthropology (Ingold's discussion of "the trace"), archaeoacoustics and affect theory (Manning's "relationscapes" and Massumi's treatment of "the virtual" being of particular relevance).

This paper engages directly with the theme of "crossing listening paths" and outlines an experimental non-reductive methodology allowing researchers from a broad variety of backgrounds to analyse listening-in-movement-in-place through a radical empiricism located within a contemporary technologised ecology of affective intensities.

AUTHOR:

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University of Sussex / King's College London / FEUP / INESC Porto

J Milo Taylor is an artist, musician and academic working in the conjuncture of sound, movement, technology and place. Recent interests include archaeoacoustics, embodied virtuality, bio-politics and affect theory. Themes running across his diverse body of work include explorations of the archive, immersion, interactivity, intermedia and an ongoing interest in the multitude of minor and liminal timespaces of past, present and future. He teaches at the Sound Arts & Design Department at London College of Communication (where he gained his Ph.D. in 2009) and is an associate of the proximate Creative Research into Sound Arts Practice research unit (www.crisap.org) directed by Cathy Lane and Angus Carlyle. Milo is also closely involved with the London Sound Artists Working Group and a key collaborator in the Opensound project which involves partner organisations in 7 European countries. The two year funded project (2011-2013) explores a number of issues around sound: open-source technologies, non-formal learning, knowledge exchange, public engagement and listening. He recently completed a Post Doctoral Research Fellowship at the University of Sussex, Brighton under the direction of Kirk Woolford and Sally Jane Norman. The Motion in Place Platform developed motion capture technologies to explore human understandings of place through movement. It is a discussion of this project (www.motioninplace.org) that he will be presenting at WFAE 2011.

Kirk Woolford is a practicing photographer and programmer who works closely with digital and creative industries. Prior to joining the University of Sussex, he set up and directed web development and video games production companies in New York, London, and Amsterdam – working with partners including the Economist Group, BBC, Channel 4, FilmFour, Illuminations, Babel Media, and THQ to produce online education, and entertainment systems. He remains active in the creative industries through his role as a founding company director of The Storey, Lancaster's Creative Industries Center opening in Dec 08. His research is practice-led and he continues to actively exhibit his work in international venues including Shanghai eArts, ARCO Madrid, Art Cologne, P.S.1. (MoMA), Venice Biennale, Gulbenkian Foundation Lisbon, Monaco Dance Forum, Ars Electronica, ISEA, and SIGGRAPH. He has collaborated on performances with igloo, Charleroi Danses, Diller+Scofidio, Susan Kozel, Frederique Flamand, Fabrizio Plessi, and others.

Sally Jane Norman is a theorist (Doctorat d'état, Paris III) and practitioner, Professor of Performance Technologies and founding Director of the Attenborough Centre for the Creative Arts, University of Sussex. She is regularly engaged in and publishes on research involving embodiment and technologies in the performing arts, working with international organisations including the Institut International de la Marionnette (1994 Motion Capture e-Motion Capture workshop), Studio for Electro-Instrumental Music in Amsterdam (Touch Festival and Artistic Co-Direction, 1998-2000), and the Zentrum für Kunst und Medientechnologie (European Framework arena Extended Performance project, 1997-1999). Sally Jane launched an interdisciplinary motion capture research strand as founding Director of Culture Lab at Newcastle University (2004-09), before moving to Sussex in 2010.

Martin White (Reader in Computer Science) He holds an HNC in Electronic Engineering from Bournemouth University (formally Dorset Institute of Higher Education), a BSc (Hons) in Computer Systems Engineering, and a PhD in Computer Science (Computer Graphics)—both from the University of Sussex. After working as a contract researcher on several EU research projects focused on computer graphics in the early 90's, he started as a lecturer in Electronic Engineering at the University of Sussex in 1995. He is currently leads a research team on digital heritage and motion capture applications in the Interactive Systems group (Computer Graphics Centre) at Sussex.

Stuart Dunn Stuart is Research Fellow at KCL's Centre for e-Research (CeRch), and received a PhD in Aegean Bronze Age Archaeology from the University of Durham in 2002. Before joining CeRch he worked for the AHRC's ICT in Arts and Humanities Research Programme. He has published on topics in e-science, on e-

science methods in archaeology, and in the fields of Minoan environmental archaeology and geospatial archaeological computing. Currently his main research interests are geospatial technologies, services and resources and academic Spatial Data Infrastructures and the integration and management of cultural heritage data.

Leon Barker has recently completed his PhD at the SCIRIA Research Unit (Sensory Computer Interface Research & Innovation in the Arts), University of the Arts London. His project explored pervasive interfaces, computer vision and gestural interaction.

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Title of Presentation: *“Situational listening as a methodology for rehearing the past: Ancient Mycenae Ortygia and Dordoni.”*

Abstract:

This paper argues that any attempt to rehear the past is by necessity an aggregate of information knowledges: printed words, visual images, site descriptions, the built environment, material culture from pottery, jewellery, cartography, historical and social records, epigraphy, the natural environment and sound engineering. But the dominant connecting thread to the past is the site itself, its acoustic features and soundscape which may still provide vital clues in reconstructing the sounds of the past and help us to reimagine what might have been heard over three thousand years ago. In this paper three ancient Greek sites have been recorded and graphically analysed over a ten year period in order to arrive at a retrospective listening condition which may provide pointers to important characteristics needed for rehearing the past over the longer term. The Mycenaean Tomb of Atreus, the sacred Oak of Dordoni and the ear of Dionysis in Ortygia are three case studies chosen for their indoor, outdoor, sacred and secular functions as they impact on the present acoustic environment and the sounds once heard. Sounds of continuity or discontinuity? Can we hear them? What does the ephemeral world of sound today tell us about the sound heritage of ancient cultures?

AUTHOR

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Dr Ros Bandt is senior research fellow in sound and culture at the Australian Centre The University of Melbourne. She is author of the book *Hearing Places* with audio CD with co-editors Michelle Duffy and Dolly McKinnon (Cambridge Scholars Publishing, UK), and founding director of the ARC funded multi-media online gallery and data base The Australian Sound Design Project Research facility, www.sounddesign.unimelb.edu.au. For thirty years she has been reconstructing ancient music of the Mediterranean with the ensemble La Romanesca and was commissioned by the West Deutsche Rundfunk, Kohn, to compose *Thrausmata*, (ancient Greek Fragments), for her *Sonic Archaeologies* CD, MOVE RECORDS, an original composition situating ancient Greek literary fragments in modern soundscapes in an electro-acoustic environment. As an international sound artist she is well known for her soundings of acoustic spaces, including the Justinian Yerebatan Cistern Istanbul in May 2010.
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Title of Presentation: *“Listening to the Cosmos: Re-positioning the Sonic Outcomes of Space Research as the Basis of Sound Art.”*

Abstract:

The proposed paper will discuss the development and presentation of a series of unique interactive sound installations that explore a range of sonic outcomes derived directly from space research and re-position these as sound material for the development of sound art. This approach was informed by the practice of certain space researchers who utilise data

sonification techniques as a means towards the analysis of cosmological phenomena.

The works simultaneously encompass notions of science communication through sound, together with the creation of innovative installation environments, which are multi-dimensionally interactive. They include The Hydro-Acoustic Big Bang Filter, a large-scale interactive installation, effectively a large musical instrument, that allows an audience to hear (and play) the sound of the Big Bang: an audio manifestation of the Cosmic Microwave Background (CMB), radiation that is believed to be residual of the Big Bang itself some 15 billion years ago. Other works under discussion will include The Earth's Original 4.5 Billion Year Old Electronic Music Composition, revealing the planet's own electro-acoustic composition which is as old as the planet itself and is continuously unfolding around us, and The Heliosonic Resonator, whose sound stream, created by NASA researchers, is generated by seismic disturbances of the spinning core of the Sun.

In certain cases the sound materials incorporated into the works were created by leading research scientists and thus this paper not only investigates the repositioning of the sonic outcomes of scientific research as artistic material, but also suggests that, in so doing, something of the classical unity of disciplines is regained and that artists and scientists can, once again, feel as though they are living in the same universe.

AUTHOR

McGinley, Robin, Co-Director, Interactive Agents

Robin McGinley is a British musician, sound curator, freelance producer, arts educator and animateur. He holds a PhD in Electro-Acoustic Music Composition from De Montfort University, UK and is codirector of Interactive Agents – the independent production company and R&D think tank: www.interactive-agents.com

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