soundscapes

under the stars

PROGRAM

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Jonathan Abel, Bissera Pentcheva & others (acoustic design, recordings)

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From industrial sounds to prosaic kitchen utensils, from real voices to audible dreams, through gateways to imagined and real spaces, pure immersive spatial joy. Sound and space carefully crafted and patiently shaped into musical forms coming out of 20 loudspeakers surrounding you. Complete darkness, under the stars. Relax, close your eyes, open your ears (wide!) and let yourself be transported to places unheard... (fll)

Fernando Lopez-Lezcano, Curator

PROGRAM NOTES

BEASTory (2010)   **Jonty Harrison**
12 channels, 8' 10"

Based on the sounds of the BEAST system when it is not actually performing (i.e. when it is being stored, transported, set up or taken down), this short piece is an initial attempt to explore the fuzzy boundary between composition and performance made available by a large loudspeaker system (BEAST), controlled by flexible and sophisticated software (BEASTmulch – largely written by my colleague and friend, Scott Wilson). The recordings were made on BEAST gigs and, with the assistance of Julien Guillamat, in the 'BEAST store' (hence the awful title – sorry!).

(BEAST is a sound diffusion system specifically designed for the performance of electroacoustic music. Created in 1982, it is a project of the Electroacoustic Music Studios at the University of Birmingham under the directorship of Jonty Harrison. Simply put, it consists of a set of up to 100 loudspeakers connected to a diffusion console)

Stria (1977)   **John Chowning**
4 channels, 15'46"

John Chowning's composition Stria was commissioned by l'Institut de Recherche et Coordination Acoustique/ Musique (IRCAM) for its first major concert series, "Perspectives of the 20th Century," and first performed in Paris on 13 October 1977. But parts of the original source code were lost, and it was written in now obsolete computer languages (SAIL, MUSIC 10). Furthermore, the audio quality of the original is lower than what is possible today, and the previously released CD version departed in places from the composer's intentions. These factors motivated the reconstruction of Stria. Olivier Baudouin and Kevin Dahan each studied the original source code and audio in consultation with the composer, resulting in new versions of the source code and new, high-quality sound files. We will listen today to the quadraphonic audio rendered by Kevin Dahan's code.

(from the 1977 program notes by JC) The conception of STRIA was dependent upon the unique possibility in computer sound synthesis of precise control of the frequencies of the partials of a sound. In STRIA, a non-octave division of the pitch space is based on a ratio which is also used to order the relationships between the inharmonic spectral components. The ratio is that of the Golden Section, PHI Φ = 1.618, known from antiquity, which in this unusual application of Frequency Modulation synthesis yields an order to the partials and a certain transparency that is not possible with natural inharmonic sounds. The composition of the work was dependent upon computer program procedures, specially written to produce the enormous amount of data that specified the details of the complementary relationship between pitch space and the ordered inharmonic partials. In addition, these procedures are at times recursive allowing musical structures which they describe to include themselves in miniature form -similar in idea to the embedded fractal geometries of Benoit Mandelbrot. From the beginning, Stria softly unfolds element by element, overlapping such that the inharmonic

partials create increasing spectral densities, ordered by ratios of PHI in both time and pitch. The major division of STRIA is at the Golden Section where recursion is used to create enormous acoustic mass. The final section of the composition is the inverse of the beginning, becoming ever less complex until it ends with a fading pure tone.

Castalie (2008)   **Giles Gobeil**
32 channels, 10'35"

Free adaptation of The Glass Bead Game / Das Glasperlenspiel (1943) by Hermann Hesse (1877-1962).

In this composition I wanted to illustrate different moments in the life of the main character of the novel, Joseph Knecht alias Magister Ludi. And also, to celebrate the 60th anniversary of the birth of concrete music, I chose to use, almost all concrete sounds, with little or no treatment, so to be more close to the spirit of origins.

Castalie was realized in 2008 at the studios of the Technische Universität (TU) in Berlin (Germany). It was premiered on July 31th during the SMC'08 festival in Berlin, presented in a 32 tracks version, using three diffusion system (Wave Field Synthesis, Mini Klang Dome and acousmonium from GRM Paris in the WFS Hall, Technische Universität (TU). It was commissioned by the DAAD (Deutscher Akademischer Austausch Dienst / Berliner Künstlerprogramm). It has been awarded the first prize (audio) at the 6th Black & White Audiovisual Festival in Porto (Portugal) (2009), and awarded a mention at the 36th Bourges International Competition of Electroacoustic Music and Electronic Arts (France) (2009).

Kitchen <-> Miniature(s) (2005)   **Fernando Lopez-Lezcano**
24 channels, 9'32"

A good quality sound recorder and a kitchen. Humanity tuned to common shapes and sizes that create shared resonances I have come to recognize everywhere there is a kitchen. These tightly chained miniatures explore a few of the many kitchen utensils and small appliances that I recorded (that is, anything that would fit with me inside my bedroom closet). Featured prominently through the piece is the mechanical timer of a toaster oven, as well as cookie sheets, plates, trivets, the klanging sound and inner resonances of the lid of a wok and many more kitchen instruments. More than 3000 lines of Common Lisp code are used to create large scale forms and detailed sound processing. Without Bill Schottstaedt's CLM (Common Lisp Music), Juan Pampin's ATS (Analysis, Transformation and Synthesis) and Rick Taube's Common Music this piece would not have existed. Grani (a granular synthesis software instrument) and other old software friends I have created over the years helped as well.

Firmament-schlaflos (2010)   **Hans Tutschku**
16 channels, 20'25"

A universe of sound is surrounding us "from within". It's composed of our dreams, fears and longings. It only exists within our body, our own imagina-

tion. We want to share it - but there are no words, no possible descriptions. We are sitting on a meadow on a warm night - alone; watching the stars. Nobody is disturbing our thoughts. Nobody is limiting our space. We don't have to rush anywhere; we have time to let go and to follow these sounding creatures...

It's not a nightmare - it's just the interplay of our imaginations.

Prokeimenon for the Feast of St. Basil (12th century)
40 channels, 3'12"

Jonathan Abel, Bissera Pentcheva & others, acoustic design and recording

Possibly 12th century; performed by Cappella Romana and recorded at the CCRMA Stage; auralized in a virtual Hagia Sophia by **Jonathan Abel**, **Miriam Kolar**, **Mike Wilson**, **Nicholas Bryan**, **Patty Huang** and **Bissera Pentcheva** based on acoustic measurements made by Bissera Pentcheva in Hagia Sophia, with the kind permission of the AyaSofya Müzesi; spatialized to 16.4 in collaboration with **Fernando Lopez-Lezcano**.

This piece grew out of the Icons of Sound project, an interdisciplinary research effort supported by the Stanford Presidential Fund and SiCa, and directed by Bissera Pentcheva of Art & Art History and Jonathan Abel of CCRMA. The project focuses on the interior of Hagia Sophia built by emperor Justinian in 532--537 and employing visual, textual, and musicological research, video, balloon pops, the building of architectural and acoustic models, auralizations, and the recording of Byzantine chant.

The Great Church of Constantinople, present day Istanbul, has an extraordinarily large nave spreading over 70 meters in length, marble covering the floor and walls, and crowned by a dome glittering in gold mosaics and rising 56 meters above the ground. The marble and gold visually simulate the quiver of water as light streaming through the windows animates the polished surfaces. This sensation of moving water, achieved through the visual animacy of shimmering surfaces, is simultaneously enhanced by the wet acoustics of the space. With reverberation lasting slightly over 10 seconds, human breath emptied in the form of chanting is transformed into the sound of water splashing against the walls.

We have created a new method using balloon pops to measure the acoustic parameters of a space and build a computational model of how the space imprints itself on sound. This model has enabled us to auralize recorded music and offer contemporary listeners the aural experience of Hagia Sophia. The Prokeimenon was recorded dry, and processed in this way.

Transcription and edition: Ioannis Arvanitis

Psalm 48 (49): 3
 Ὸ στόμα μου λαλήσει σοφίαν - My mouth shall speak Sophia (wisdom)
Psalm 48 (49): 1
 ἀκούσατε ταῦτα πάντα τὰ ἔθνη - Hear these words, all ye nations
Psalm 48 (49): 2
 οἵ τε γηγενεῖς καὶ οἱ υἱοὶ τῶν ἀνθρώπων - And those born sons of men

Dreaming in Darkness (2005)   Åke Parmerud
6 channels, 10'29"

What does someone who can not see dream about? What happens during sleep in a mind to which images of the world are primarily perceived through sound?

Dreaming in Darkness is an attempt to create surrealistic fragments of a blind persons dreams. The piece gradually develops from a starting point which resembles the soundtrack of a film where ambiences and situations change through the opening and closing of doors. Gradually the "representative" sounds are replaced by more abstract and musical material, displacing the character of realism towards an acoustic "in between" where the boundary between the representative and the imagined is erased.

This piece originated as an experimental collaboration with composer Natasha Barrett. We decided to compose with sounds that we would exchange with each other. The idea was to see how the compositional process is affected by not being able to choose the sounds for yourself but rather to develop a relationship based on another persons choice and preferences. For various reasons both pieces went astray from the concept. However we both ended up using sound sources from each other. In this piece the sounds from Natasha enters the stage as the piece progresses into the more abstract part of it´s development.

The piece was commissioned by GRM and realised at the GRM studios in Paris.

ABOUT THE ARTISTS

Jonathan S. Abel is a Consulting Professor at the Center for Computer Research in Music and Acoustics (CCRMA) in the Music Department at Stanford University, working in music and audio applications of signal and array processing, parameter estimation and acoustics. He was a Co–Founder and Chief Technology Officer of the GRAMMY Award-winning Universal Audio, Inc., a researcher at NASA/Ames Research Center, Chief Scientist at Crystal River Engineering, Inc., and a lecturer in the Department of Electrical Engineering at Yale University. He holds Ph.D. and M.S. degrees from Stanford University and an S.B. from MIT, all in electrical engineering. He is a Fellow of the Audio Engineering Society for contributions to audio effects processing.

John Chowning Osgood Hooker Professor of Fine Arts, Emeritus. B.M., Wittenberg University, D.M.A., Stanford University, Studies with Nadia Boulanger, Paris, 1959-62. Fields: computer music, composition, auditory/music perception. Patents: The Simulation of Moving Sound Sources, The Synthesis of Complex Audio Spectra by Means of Frequency Modulation. Publications, Recordings: Journal of the Audio Engineering Society, Schott / WERGO. Grants, Awards: artist-in-residence, Kunstlerprogramm des Deutschen Akademischen Austauschdiensts, Berlin, 1974; invited composer/researcher IRCAM, Paris, 1978, 1985; Fellow, American Academy of Arts and Sciences, 1988; Honorary Doctor of Music, Wittenberg University, 1990; Dipl .Atme d'Officier dans l'Ordre des Arts et Lettres, French Ministre de la Culture, 1995; Doctorat Honoris Causa, Universit .Ai de la Miditerranie, Marseille, 2002.

After studies in music theory, **Gilles Gobeil** completed his Master's in composition at Université de Montréal. Since 1985 he has concentrated on the creation of acousmatic

and mixed works. His compositions approach what is known as "cinéma pour l'oreille" (cinema for the ear); many of them are inspired by literary works and seek to "visualize" them through the medium of sound. He has been awarded more than twenty prizes in Canada and internationally, such as Black & White (Portugal, 2009), Ars Electronica (Austria, 2005, 1995), Bourges (France, 2009, 1999, 1989, 1988), Stockholm Electronic Arts Award (Sweden, 1997, 1994), CIMESP (Brazil, 2001, 1999, 1997), Métamorphoses (Belgium, 2002, 2000), British Design & Art Direction (2002), Ciber@rt (Spain, 1999), Luigi Russolo (Italy, 1989, 1988, 1987), Newcomp (USA, 1987), SOCAN (Canada, 1993), Conseil Canadien de la Musique (1985), Brock University (1985), SDE Canada (1984). He has received numerous commissions and has participated to several international festivals. He has also been Composer-in-Residence at The Banff Centre (Canada, 1995, 1993), Bourges (France, 1991), GRM Groupe de recherches musicales (France, 1993), ZKM Zentrum für Kunst und Medientechnologie (Germany, 2009, 2007, 2006, 2005), Hochschule Franz Liszt in Weimar (Germany, 2010) and was Guest Composer of the DAAD's Artists-in-Berlin Programme (Germany) in 2008. He is a member of the Canadian Electroacoustic Community (CEC), Associate Composer of the Canadian Music Centre (CMC) and co-founder of Réseaux.

Jonty Harrison studied with Bernard Rands, David Blake and Elisabeth Lutyens at the University of York, UK, gaining his DPhil in Composition in 1980 and discovering the electroacoustic music studio along the way. Between 1976 and 1980 he lived in London, preparing electroacoustic material for a number of productions at the National Theatre and teaching studio techniques at City University. In 1980 he joined the Music Department of the University of Birmingham, where he is now Professor of Composition and Electroacoustic Music and Director of the Electroacoustic Music Studios and BEAST (Birmingham ElectroAcoustic Sound Theatre). Over the past 30 years he has taught a number of graduate composers from the UK and overseas, many of whom are now themselves leading figures in the composition and teaching of electroacoustic music in many parts of the world. As a composer he has won several awards (Bourges Awards; Prix Ars Electronica; Musica Nova; the Lloyds Bank National Composers' Award; the PRS Prize; an Arts Council Composition Bursary; a Leverhulme Research Grant and AHRB/C Research Grants), and received commissions from leading institutions and performers. His music is performed and broadcast worldwide, and several works are available on two 'solo' CDs (Articles indéfinis and Évidence matérielle) and a DVD-Audio (Environs), and on compilation CDs from NMC, Mnémosyne Musique Média, CDCM/Centaur, Asphodel, EMF and Collins.

Miriam A. Kolar is a Ph.D. candidate at the Center for Computer Research in Music and Acoustics (CCRMA) at Stanford University. A lifelong musician and audio craftsperson, her ongoing investigation into matters of human audition in diverse sonic spaces has led to her current interdisciplinary research in archaeological acoustics. Prior to her study at Stanford, Miriam worked in Los Angeles as a recording engineer, performance sound designer and mixer, and was on faculty as Coordinator of the undergraduate program in Multi-focus Music Technologies at California Institute of the Arts (CalArts). Miriam is currently developing her Ph.D. Dissertation, Archaeological Psychoacoustics at Chavín de Huántar, Perú, that examines the psychoacoustic dimension of architectural acoustics in the 3000-year old Andean ceremonial center.

Fernando Lopez-Lezcano is a composer, performer, lecturer and computer systems administrator at CCRMA. He has been teaching, playing with sound and music and taking care of computing resources there since 1993. He has been involved in the field of electronic music since 1976 as a composer, performer and instrument builder, blurring the lines of his dual background in music (piano and composition) and electronic engineering. His interest in space as an important component of his music dates to 1992 and his four channel piece "Three Dreams". For the past few years he has been teaching the "Sound in Space" course and related workshops, and takes care of multichannel spaces at CCRMA. His music has been released on CD and played in the Americas, Europe and East Asia. He taught at Keio University in Japan in 1992 and was the "Edgar Varese Guest Professor" at TU Berlin during the Summer 2008 semester.

Åke Parmerud has been working full time with music and multimedia art since late –70. Being trained as a photographer between 1972-74, he studied music at the University and later at the Conservatory of Music in Göteborg, Sweden. His list of works includes instrumental music as well as electro acoustic compositions, multi-media and interactive art, video and music for theater, dance and film. He is the most rewarded composer of electro acoustic music since 1978 when his piece "Proximities" received a first prize in the international festival for music in Bourges, France. His music has been released on 2 LPs and 2 CDs and also appears on several compilations. Music by Parmerud has represented the Swedish Radio in Prix Italia at two occasions and he has composed a number of works commissioned by international institutions. Åke Parmerud also works as stage performer, doing live electro acoustic music with different kinds of interactive instruments. Solo or together with other artists. He has since 10 years worked as a sound and software designer for innovative interactive audio/visual installations and his own works "The Fire Inside", "The Living Room" and "Lost Angel" has been shown in Berlin, Paris,Mexico City, Leon Gothenburg and Reykavik. Furthermore Parmerud has created various concert designs and acted as artistic director of large audiovisual events indoors as well as outdoors. His success as artist has led to several international collaborations.

Bissera Pentcheva is associate professor at the Dept. of Art and Art History at Stanford whose work focuses on Byzantium and the Medieval Mediterranean, more specifically aesthetics and phenomenology. She has published two books with Penn State Press: "Icons and Power: The Mother of God in Byzantium," 2006 that won the John Nicholas Brown prize form the Medieval Academy of America in 2010 and "The Sensual Icon: Space, Ritual, and the Senses in Byzantium," 2010. Pentcheva has held a number of prestigious fellowships among them: Mellon New Directions Fellowship, Alexander von Humboldt, Onassis Foundation, Dumbarton Oaks, and Columbia University's Mellon Post-doc.

Hans Tutschku. Born 1966 in Weimar. Member of the "Ensemble for intuitive music Weimar" since 1982. He studied composition of electronic music at the college of music Dresde and had since 1989 the opportunity to participate in several concert cycles of Karlheinz Stockhausen to learn the art of the sound direction. He further studied 1991/92 Sonology and electroacoustic composition at the royal conservatoire in the Hague (Holland). 1994 followed a one year's study stay at IRCAM in Paris. He taught 1995/96 as a guest professor electroacoustic composition in Weimar. 1996 he participated in composition workshops with Klaus Huber and Brian Ferneyhough. 1997-2001 he taught electroacoustic composition at IRCAM in Paris and from 2001 to 2004 at the conservatory of Montbéliard. In May 2003 he completed a doctorate (PhD) with Professor Dr. Jonty Harrison at the University of Birmingham. During the spring term 2003 he was the "Edgar Varèse Gast Professor" at the TU Berlin. Since September 2004 Hans Tutschku has been working as composition professor and director of the electroacoustic studios at Harvard University (Cambridge, USA). He is the winner of many international composition competitions, among other: Bourges, CIMESP Sao Paulo, Hanns Eisler price, Prix Ars Electronica, Prix Noroit and Prix Musica Nova. In 2005 he received the culture prize of the city of Weimar.

Michael Wilson is a graduate student pursuing an MA/MST degree at CCRMA, Stanford University. He previously worked as a software and design engineer at Altera Corporation. He received a Bachelor of Science with Honors in Computer Science the California Institute of Technology.