

University of Washington
The School of Music Computer Center

E44
1994
4-25

presents



A Concert of Electro-Acoustic Music

Richard Karpen, *director*

works by
Chafe
Thome
Karpen
Averill
Oppenheim

8:00 PM
April 25, 1994
Meany Theater

School
of
Music

University
of
Washington

DAT
12,369

CASS
12,370

PROGRAM

DAT
102 **FREE MOTION** (18'30) Chris Chafe
for solo stringed instrument and taped computer sound
I. Friction
II. Mesh
III. Rubbing
IV. Capture and Release
Chris Chafe, *Celletto*

103 **MASKS OF ETERNITY (Work in Progress)** for solo tape.... Diane Thome (14'58)

104 **LIFE STUDY** for clarinet and computer-realized sound..... Richard Karpen (12'10)
Joel Barbosa, *Clarinet*

INTERMISSION

106 **AES * AURICHALCUM * CADMIA * GALMEI** (7'00) Ron Averill
for computer-realized sound

107 **CONCERTO IN "D"** for Celletto and Computer Daniel Oppenheim (23'25)
Chris Chafe, *Celletto*
Daniel Oppenheim, *Computers*

108 **DENOUEMENT** for computer-realized sound..... Richard Karpen (6'42)

FREE MOTION is a duo between a freely improvising soloist and a tape composed with sampled sounds. The tape was finished at CCRMA in April, 1990, after being at it for about nine months. The movements explore the phenomenon of friction, which was on our minds at CCRMA during this time in various ways, from bowed string research to practical lessons in plate tectonics (the quake of '89). The sampled sounds were played on a Sequential Circuits Studio 440 and processed through a Yamaha DMP11. The two devices were controlled from a Mac+ running MIDI Lisp algorithms written by the composer. The final montage of the piece was done on a Studer/Editech Dyaxis, a digital audio editing system.

The work is similar in its sound materials to the previously composed tape work "Vanishing Point," but it differs in its construction. The earlier work was composed while improvising with chaos algorithms. The phrases created this way were very active, but difficult to extend as background accompaniment as was needed for the current piece. Starting with the same phrases generated in the chaos world, loops and reiterative methods were applied to make these "germs" persist or sit still a little better. Free Motion was premiered by contrabassist Stefano Scodanibbio at Stanford in April, 1990. It can be performed on any bowed string instrument.
[Notes by Chris Chafe]

CHRIS CHAFE (Switzerland, 1952, U.S. citizen) is a composer/cellist with an interest in using the computer as an aid to music composition and performance. He is the Technical Director of the Center for Computer Research in Music and Acoustics at Stanford University where he also teaches courses in computer music. His doctorate in music composition was granted at Stanford in 1983, where he studied computer music. Prior degrees in music were from the University of California at San Diego and Antioch College. He has performed his music in Europe, the Americas, and Asia, and has several compositions recorded on compact disc.

While my music is often inspired by poetry or poetic images, the initial impetus for MASKS OF ETERNITY was visual. The striking and powerful masks displayed in the Museum of Northwest Indian Art in Juneau, Alaska made an unforgettable impression on me when I saw them in late summer, 1993. It seemed that behind the forms and frozen expressions of these remarkable artifacts lay worlds of human experience, association and meaning that could still resonate in the imagination of the viewer. The second impetus arose as a result of my collaborative discussions with choreographer and chair of the University of Washington Dance Department, Hannah Wiley, to compose a work which could be projected kinetically and choreographically as a set of mythic images which are progressively unveiled and dynamically articulated. The final influence on the piece was Sri Aurobindo's elucidation of the four aspects or personalities of the Divine Mother known as Mahasaraswati, Maheshwari, Mahakali and Mahalakshmi. It is said that the archetypal presences which these goddesses symbolize within all human beings, although disguised, can be evoked and experienced as living and transformative energies.

Equipment used in the creation of the tape included a Kurzweil 2000 digital synthesizer and Cakewalk for Windows sequencing software. The sections were digitally mixed using the MTU Microsound Digital/Audio System. I wish to thank Robert Austin who was my collaborator in the production of the tape.

Masks of Eternity was commissioned by the Washington State Chapter of the Music Teachers National Association (MTNA) as part of its 1994 Composer of the Year Award.
[Notes by Diane Thome]

Composer of a wide variety of works which span solo, chamber, choral, orchestral and electronic media, *DIANE THOME* is the first woman to write computer-synthesized music. Her compositions have been presented in Europe, China, Australia, Israel, Canada and throughout the United States. She has been the guest of the Ecole Nationale Claude Debussy and featured on French Radio, composer-in-residence at the University of Sussex and the Bennington Chamber Music Conference and Composers Forum of the East, and an invited composer at International Computer Music Festivals, and many others. Her collaborative works include *Night Passage*, an environmental theater piece presented in the pavilion of the Moore College of Arts in Philadelphia and *Angels* for virtual reality artwork shown at the Biennale des Arts Electroniques in Paris. Her music has been recorded on the CRI, Crystal Records, Opus One, Tulstar, Capstone and Centaur labels.

In recent years she has served as composer panelist for the Wisconsin, Massachusetts and Illinois State Arts Councils, as co-chair of the National Endowment for the Arts Composer Fellowship and Performer Consortium Panels and as Executive Board Member of American Women Composers, Inc. Most recently she has been elected the Composer Board Member of the College Music Society.

The first woman to receive a Ph.D. in Music from Princeton, she also holds an M.F.A. in composition, an M.A. in Theory and Composition from the University of Pennsylvania, and two undergraduate degrees with distinction in piano and composition from the Eastman School of Music. A member of American Composers Alliance and Broadcast Music, Inc., Diane Thome is Professor of Theory and Composition at the School of Music of the University of Washington.

LIFE STUDY, composed in 1993, is a work for clarinet and computer-realized sound. It is a rather short work that was composed after much thought about the virtuosity in so much music for solo performers, including my own previous compositions. What I was after, in *Life Study*, was a work that did not rely upon the type of virtuosity that requires gymnastic maneuvers around an instrument, but that created a small world which included the clarinet and other associations. The work is like a single frame of a narrative, which in its frozen state highlights perspective and context, suggestive of any number of narrative developments where things can happen! The computer-realized sounds were synthesized and processed using a variety of software, including my own new time/frequency

alteration algorithms in Csound on a NeXT.LPC and other types of processing were also used. The work is dedicated to W. O. Smith who first performed it at the American Academy in Rome in 1993.
[Notes by Richard Karpen]

RICHARD KARPEN (b. New York, 1957), is on the faculty of the School of Music at the University of Washington in Seattle where he teaches composition, computer music, and music theory and is director of both the School of Music Computer Center and the Humanities and Arts Computer Center. Karpen's works are widely performed in the U.S. and internationally. He has been the recipient of many awards, grants and prizes, including those from the NEA, the ASCAP Foundation, the Bourges Contest, NEWCOMP, the Luigi Russolo Contest, the National Flute Association, and The American Music Consortium. Fellowships and grants for work outside of the U.S. include a Fulbright to Padua, Italy, Stanford University's Prix de Paris to work at IRCAM, and a Leverhulme Visiting Fellowship to Scotland. He studied with Charles Dodge, Gheorghe Conestescu, and Morton Subotnick and received his doctorate in Composition from Stanford University, where, during 1985-1989, he worked at the Center for Computer Research in Music and Acoustics. Major international festivals which have included performances of his works are the Gaudeamus International Music Week in Amsterdam, the Warsaw Autumn Festival, the Sidney Spring Festival, the Bourges Festival, the International Computer Music Conferences and others. His compositions have been recorded on compact disc by Le Chant du Monde, Wergo, Centaur, and Neuma.

AES * AURICHALCUM * CADMIA * GALMEI

Sampling, the digital recording and manipulation of acoustic sounds, has changed music forever. In the pop music world, performers fear that a crisis situation has resulted from sampling, that live musicians will be replaced by sampling technology. In the art music world, performers (and audiences) share similar fears.

Computer music composers use sampling for many different purposes. A sampled gong can be used to replace an acoustic gong, or can be manipulated so that it sounds nothing like a gong. Similarly, sampled phrases of music can be used to sound like the sampled phrase (this being called a quote), to generate music that sounds nothing like the sampled phrase, or, as in my recent work, to generate pitch/harmonic material similar to the sampled phrase. In using this latter method, I have "recomposed" well-known music, leaving it still recognizable as the sampled material, and borrowed obscure music.

In planning *aes * aurichalcum * cadmia * galmei*, I set out to use sampling in different ways: making highly recognizable source material unrecognizable, and leaving other well-known source material recognizable but altering the sound quality through filtering and other means. To the latter end, Edgar Varese's *Density 21.5* for solo flute is a recurrent quote in this piece. Though raised in pitch, filtered and reverberated, the quote is always clearly recognizable. However, the context created by the surrounding material puts the quote in a new light. Addi-

tionally, a variety of recognizable phrases from varied sources are significantly altered and employed to create the underpinnings of the piece. It's not important to know the sources of these samples nor to know when they occur; the samples were chosen purely for sonic content.

I do not share the fear that sampling technology will replace live performers. There is too much tradition and loyalty (and excitement) tied up with acoustic music. But sampling has brought a new level of sonic sophistication to computer music that will continue to have a positive impact on the music world.

[Notes by Ron Averill]

RON AVERILL is currently completing his DMA in composition at the University of Washington where he is the Graduate Assistant in the School of Music Computer Center (SMCC). His recent accomplishments include receiving a scholarship from the Phonos Foundation to compose an electronic piece in 1994 at the Phonos center in Barcelona; receiving an Honorable Mention in the 1992 National Association of Composers, USA Composers' Contest for his GDOD for four trombones and piano; the premiere of gdod kreasi baru for trombone and computer-realized sounds at the Third Annual University of Washington Electro-Acoustic Music Festival; and a performance of carlos: glazed with rainwater for computer-realized sounds at the 1992 Seattle Spring Festival. Averill completed his Masters in composition at Western Washington University, studying with Edwin LaBounty and currently studies composition with Richard Karpen.

CONCERTO IN "D" for Midi Violin and Computer

A fundamental characteristic of the traditional concertato is the continuous interplay between the soli and tutti. The soloist and the orchestra perpetually oppose, negate, interact and complement each other, in a grandiose and playful splendor. How can a computer and a single performer ever achieve such a spontaneous and musical interaction?

In my quest for answers I have learned much about music that relies on technology for its materialization. What is already considered a "traditional" approach—composing for computer-generated tape and performer—often lends itself to a more traditional, almost orchestral, way of thinking. The pre-composed computer part is usually recorded on tape and is analogous to the traditional orchestra. But unlike orchestral music, the performer must adjust himself to a very rigid and non-responsive accompaniment. Using more recent techniques, similar to those pioneered by Max Mathew's Musical Drum, I was able to make the computer listen to the performer, follow him and adapt to his changes in tempo. Whereas this provided a much more flexible accompaniment I felt that it was still a one-sided affair. The mutual interaction between the performer and the orchestra in the true concertato spirit was still lacking. I finally experimented with having the computer supervise the composing of music in real time, whilst listening to the performer and allowing him to interact and influence the way in which the music is composed. Of course, the music supposedly "composed" by the computer is

always composed by me. By taking this approach I am also, as it were, bringing myself onto the stage—which is where the classical composer usually was.

The *Concerto in "D"* was composed, and is performed, entirely using my DMIX software, and could not have been realized using any other software. On the compositional side, extensive use was made of DMIX's capabilities to blend algorithmic procedures with real time graphical manipulation, as well as the ability to capture performance gestures and expressive musical nuances within DMIX and then transform them into tools that, in turn, create and/or shape other musical materials. On the performance side, the SHADOW score tracking system allows the combination of more traditional and linear performance techniques (controlling tempo and using other gestural input) with highly interactive and non-linear "performance environments." These environments are obtained using ECHO objects that respond to the performer's input in real time, much like MAX patches, and are under the constant supervision of SHADOW.

This Concerto is originally scored for a 5-string MIDI violin (a combination of violin with the added low C string of the viola). However, the version you will hear tonight is an adaptation to a cello and will be performed on a cello that was designed and constructed at CCRMA by Chris Chafe, who will also perform the work.

Synthesis is in real time using 2 Yamaha SY-77 and one DX7-11 synthesizers. The cello and synthesizers are mixed using a Yamaha DMP7 MIDI controlled mixer. This mixer has three effects busses that process the violin in real time under the continuous supervision of DMIX. [Notes by Daniel Oppenheim]

DANIEL V. OPPENHEIM was born in Jerusalem, Israel. He graduated with degrees in music theory and composition from the Rubin Academies in Jerusalem and Tel-Aviv. He received his doctorate degree in computer music and composition at Stanford University, where his research at the Center for Computer Research in Music and Acoustics (CCRMA) led to the development of the DMIX environment for musical composition and performance. His compositions include solo, ensemble, vocal, chorus, and orchestral works, electro-acoustic music, interactive works for soloist and computer, and works for theater. Mr. Oppenheim has been performed extensively in the U.S., South America, Europe, Israel, and the far east, and his music appeared on a CD series produced by Wergo. Presently Mr. Oppenheim is a senior research scientist at the Computer Music Centre at IBM's Watson Research Center, New York.

DENOUEMENT was originally composed as a possible ending for another recent piece of mine, Terra Infirma. Some of *Denouement* found its way into the end of the other piece, and some found its way into temporary musical purgatory, awaiting a new context. All of the sound materials were derived in some way from acoustic sources and most are "hybrids" in that they combine digitized sound samples with purely synthetic material, using techniques I have been

developing over the last few years. The opening chant-like music was synthesized based on LPC analyses of the words, Pericolose, ungiorno, bellezze (Dangerous, one day, beauty) from the beginning of a poem by the Italian poet Andrea Zanzotto. Denouement was realized on a NeXT system at the School of Music Computer Center at the University of Washington in Seattle using the Csound and Lisp languages.

[Notes by Richard Karpen]

This concert was made possible in part by a grant from the Seattle Arts Commission and with support from the Humanities and Arts Computer Center. Also, many thanks to Dr. Donald Miller and Barry Charles McCord for their generous support of the School of Music Computer Center.

UPCOMING 1993-94 CONCERTS:

To request disability accommodations, contact the Office of the ADA Coordinator at least ten days in advance of the event. 543-6450 (voice); 543-6452 (TDD); 685-3885 (FAX); access@u.washington.edu (E-mail).

April 28, Graduate Wind Quintet. 8 PM, Brechemin Auditorium.

April 30, Systematic Musicology Concert. 7 PM, Brechemin Auditorium.

May 1, *FACULTY RECITAL*: Soni Ventorum Wind Quintet. 3 PM, Brechemin Auditorium.

May 2-13, *SCHOOL OF MUSIC RESIDENCY*: Distinguished Hans and Thelma Lehmann Professor: William Bolcom, *pianist/composer*. (Information: 685-8384).

May 4, Joan Morris, soprano: Master Class. 1:30 PM, Brechemin Auditorium.

May 4, Voice Division Recital. 3:45 PM, Brechemin Auditorium.

May 4, Mina Miller, pianist. 8 PM, Brechemin Auditorium.

May 5, William Bolcom Celebrated: A Musical Homecoming. 8 PM, Meany Theater.

May 6, Jazz Studies Concert Series. 8 PM, Brechemin Auditorium.

May 8, An Afternoon of Gospel Preludes for Organ by William Bolcom, composer. Featuring Pat Wright and the Total Experience Gospel Choir. 4:30 PM, University Methodist Temple.

May 11, William Bolcom's Piano Etudes. 5 PM, Brechemin Auditorium.

May 12, Keyboard Debut Series. 8 PM, Brechemin Auditorium.