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< This Issue >

Craig Harris

Leonardo Electronic Almanac Volume 7, Number 7 presents the first
installment of four feature articles published in LEA as supplements
to Leonardo Music Journal (LMJ) Volume 9. The hard copy LMJ will be
published later in 1999, and the four supplemental articles that
appear in LEA provide additional in-depth perspectives.

Peter Manning presents "Ownership and Control of the Creative Process
in the Composition and Performance of Electroacoustic Music," and
David Ryan presents "De-composing Opera/Re-composing Listening: John
Cage's Europeras."

Michael Punt introduces this month's Leonardo Digital Reviews
highlights.

Patrick Lichty's Gallery work "Topologies of Narrative Mappings,
Metanarrative and New Media Art" will appear next month, in LEA Volume
7, Number 8. This will appear in conjunction with the introduction of
the next phase in development of the LEA web site: an improved
navigational scheme that will provide a substantially better mechanism
for perusing the quickly growing archive.

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|  FEATURE ARTICLE   |
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< Ownership and Control of the Creative Process in the Composition
  and Performance of Electroacoustic Music >
                         Peter Manning

Peter Manning
Department of Music
University of Durham, Palace Green,
Durham, DH1 3RL, United Kingdom.
Email: <p.d.manning@durham.ac.uk>

Abstract

The evolution of electroacoustic music has been significantly shaped
by the functional characteristics of the technologies used to produce
it. These external influences materially affect the working
environments of those who work in this medium, and in turn raise
important questions about the ownership and control of the creative
process--particularly, the extent to which such ownership and control
must be shared between composers and technology developers. The author
examines these issues from an historical perspective, highlighting the

significance of features directly attributable to the evolution of the
technology itself, during which the acquisition of increasing power
and operational versatility has generally been associated with growing
levels of complexity in its musical application. The imaginative use
of variable speed tape recorders to loop and process sounds, and the
extensive application of laboratory test gear to generate electronic
material in the early pioneering days both provide important examples
of musicians taking command of their own destinies through the
exploitation of audio tools not specifically engineered for such
purposes. With the development of custom-designed equipment and the
advent of a commercial manufacturing sector during the 1960s,
technology ceased to be an essentially passive agent and became a
highly proactive and influential force in the development of the
electroacoustic medium. The author also examines the nature and
significance of the resulting partnerships between artists and
technologists in the context of ownership and control, leading to the
proposition that the development of a mass culture in terms of
generally available technical resources has not wholly benefitted the
creative process.

Whereas an initial assessment points to the greater accessibility
which has been achieved for all those who seek to exploit the medium,
a number of important objectives have not yet been fully delivered.
Sophisticated and versatile system designs have often come at the
expense of direct contact with key processes that lie at the heart of
the underlying technology; the author pays particular attention to the
effects of this disengagement upon the creative process. The
opportunities to work with sound within the electroacoustic medium
have no precise parallels to conventional music-making, where creative
discourse continues to be expressed in terms of sound-producing agents
whose physical design and functional characteristics have changed very
little for several centuries. The electroacoustic composer not only
has to contend with the challenges of directly generating and
modifying sound material, but also the processes of constant change in
the functional characteristics of the technology itself. These
interdisciplinary partnerships raise fundamental questions of
empowerment, which the author evaluates within the broader tradition
of music composition and performance.

... [Content omitted: Ed.] ...

[Ed. note: the complete content of this article is available at the
LEA website: <http://mitpress.mit.edu/e-journals/LEA/>.]

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< De-composing Opera/Re-composing Listening: John Cage's Europeras >
                            David Ryan

David Ryan (artist, writer, musician)
26 Adelina Yard
20-22 Adelina Grove
Whitechapel, London E1 3AD, U.K.
ENGLAND

Abstract

The author examines John Cage's Europeras in the light of his practice
and the critical context of his work. In doing this, he addresses
several key issues: the question of tradition and Cage's attitude to
European traditions in particular; the use of chance operations within
the broader framework of the Europeras; and the specificity of

listening in Cage's work in conjunction with the figuring of what we might call a "non-intentional" expressivity. The author argues that Cage is ultimately much more complicit with the relics of tradition than previously thought. Contrary to Heinz-Klaus Metzger's view of the Europeras as a kind of Hegelian "sublation"---and, therefore the symbolic death of opera as medium and practice- --the author examines how the Europeras, taken as a whole, form a movement towards an increased empathy with the found materials of opera as a genre.

As a commission from Frankfurt Opera to mark John Cage's seventy-fifth birthday, the Europeras 1 and 2 seemed an unlikely vehicle for a composer who hardly appeared sympathetic to the genre of opera at all; this, according to legend, is partly why he was asked in the first place. In an interview with Joan Retallack shortly before the composer's death, the following dialogue took place:

Joan Retallack: The story goes, or one story goes, that you were a kind of mercenary, hired to kill off opera as a genre. That the two directors of the opera house in Frankfurt-- John Cage: --[Heinz-Klaus] Metzger and [Reiner]Reihn--

JR: --Yes.

JC: --Wanted that to happen

JR: Yes. In Metzger's program notes for the premiere, he declares victory in the form of your "Hegelian 'determinate negation'" of opera as a form and says the process is irreversible. Opera is prophetically pronounced dead. They wanted the end of opera and you were the hired gun.

JC: That of course didn't happen. (laughter)

... [Content omitted: Ed.] ...

[Ed. note: the complete content of this article is available at the LEA website: <http://mitpress.mit.edu/e-journals/LEA/>.]

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Michael Punt
<http://mitpress.mit.edu/e-journals/Leonardo/ldr.html>

This month in Leonardo Digital Reviews.

Starting with Kasey Rios Asberry's coverage of "Urge" installed in Yerba Buena Gardens, San Francisco, the question which underpins much of the work in this month's LDR is the mythic function of human interaction, that is how the profound oppositions that we daily encounter can be resolved at an imaginary level. The paradox of the humans claiming knowledge of a system which is beyond their

intellectual competence is developed in an extended argument by David
Topper who builds on Anthony Aveni's new study of archeoastronomy.
Topper concludes this review of three centuries of astronomy with a
thoroughly modern question which, if nothing else, points to one of
the central debates posed by excessively relativist cultural studies.
This question resurfaces in Richard Kade's review of a new translation
of Eugene Onegin by Douglas Hofstadter, and in Sintzova's and
Saifullin's discusiion of "Is C Actually Red?" Kade gently asks why we
might need another translation, and, it appears gets a satisfactory
answer from Hofstadter which points to a perceived deficit in
Jawansky's study of the relationship between sound and colour; namely
that in this cultural analysis of synaesthesia there is a lack of
relativism in its Eurocentric bias. Such oppositions will never be
resolved but their continued airing in art works, books and reviews
will allow us to develop creative strategies which do not dissolve
contradictions in a unthinking orthodoxy.

Elsewhere Carlos Paombini prepares us for this year's meeting in Sao
Pualo with a reflection in "Musica de Invencao", whilst Robert
Coburn's review of a new CD reminds of the importance of Xenakis as a
seminal figure in contemporary music who joins together the creative
thinking of scientists with the performative acts of the musician.

In this month's LDR:

Urge.
Interactive bronze and steel sculpture
Yerba Buena Gardens, San Francisco
Chico Mac Murtrie & Amorphic Robot Works
(Project Engineer: Dave Fleming; Project Manager: Todd Blair;
Fabrication: Marc 9, Vicente Contredas, Andrew Forrest, Juan Martinez,
Bruce Mulligan, Tom Phillips)
Sponsored by San Francisco Redevelopment Agency
Permanent - unveiled July 17, 1999

Reviewed by Kasey Rios Asberry

Musica de invencao.
de Augusto de Campos.
Editora Perspectiva, Sao Paulo, Brazil, 1998.
274 pp., ilus. Broch., R$30,00.
ISBN: nao consta.

Resenhado por Carlos Palombini

Book Review: Stairways to the Stars: Skywatching in Three Great
Ancient Cultures.
by Anthony Aveni
John Wiley & Sons
New York USA
1997; 1999 paper, $15.95 US
230pp. ISBN: 0-471-32976-2

Reviewed by: David Topper.

Book Review: Eugene Onegin: A Novel in Verse.

Eugene Onegin: A Novel in Verse by Alexander Sergeyevich Pushkin
Versified Translation, Preface and Notes by Douglas R. Hofstadter See

also: <http://www.psych.indiana.edu/cogsci/hofstadter.html>.
New York, Basic Books, 1999

Reviewed by Richard Kade.

CD Review: Xenakis: Electronic Music.
EMF CD003
Electronic Music Foundation
<http://www.emf.org>

Reviewed by Robert Coburn.

Book Review:Is C Actually Red?
Ist C Rot? Eine Kultur - und Wissenschaftsgeshichte zum Problem der
wechselseitigen Beziehung zwischen Ton und Farbe: von Aristoteles bis
Goethe.
Joerg Jewanski
Sinzig Studio,
Verl.Schewe, 1999, 689 S. Berliner Musik Studien; Bd.17.

Review by S.V. Sintzova and R.F.Saifullin.

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Visit Leonardo Digital Reviews online to read these reviews in full
together with the latest postings in LDR Raw as they come in.
<http://mitpress.mit.edu/e-journals/Leonardo/ldr.html> Your comments
are welcome at <kasberry@humanorigins.org>

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                   | OPPORTUNITIES |
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< Posts in School of Computing and SCOTCAT Vacancy >

John N Sutherland
Senior Lecturer in Computing
University of Abertay Dundee
Email: <vsmm-sec@vsmm.org>

Announcing the following job vacancies in the School of Computing at
the University of Abertay Dundee. We are keen to see a strong group of
applicants for these significant posts as the School continues to
expand into its area of research and teaching in computer games and
edutainment technologies.

FYI the School of Computing is the largest in a university in Scotland
offering 7 degree programs with 780 students last year rising to about
900 this year. The University of Abertay Dundee is the most popular in
the United Kingdom, when measured by rise in applications (25% more
applications to study degrees here this year) against the national
average (down 5%). We have a 500,000GBP SHEFC grant to establish a
games research centre, 20,000GBP EPSRC grant to develop a kids
teaching game and 36,000GBP SET grant to develop groups of graduates
into stand-alone games companies. We have excellent links with
computer games, recorded music, multimedia and education companies and
with specific significant international universities and
organizations.

The University has the world's first university computer games degrees. The BSc Computer Games Technology course accepts 40 students internationally from about 400 applicants annually. The BA Computer Arts is a unique games design and audio course. The MSc Software Engineering (Games Technology) is the only graduate program in games development world-wide.

We would consider recently completed non-European Union PhD students for a lectureship position as a means to building their academic profile, even if this is for a short period of, say, 2 years.

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< Computer Music Research Position at Dartmouth >

Send applications (electronic only) to:
<postgrad@music.dartmouth.edu>

For more information, please contact:
Dianne Copley
Administrative Assistant,
Bregman Electronic Music Graduate Program
Email: <Dianne.D.Copley@Dartmouth.EDU>

One Year Post-Graduate Research Position in Computer Music
Dartmouth College, Bregman Electronic Music Studio

Effective immediately!

August, 1999

We are pleased to announce a one year post-graduate position at the Bregman Electronic Music Studio, in conjunction with the Department of Mathematics. We are seeking a qualified computer musician with excellent web design, writing, editing, and research skills, to assist in the development of a web-based computer music education project.

Applicants should have expertise in computer music, considerable web design experience (and be fluent in HTML, javascript, and graphics design packages) and have strong writing, research, and editorial skills. Additionally, since this is a group project, applicants should be able to work well with others towards a common goal. Salary commensurate with graduate stipends.

Additionally, part-time music theory teaching opportunities may be available, depending on qualifications.

Applications MUST include:

 -cover letter (email only)
 -url pointing to applicant's cv
 -url(s) pointing to website designed and/or implemented by applicant
 -2 references with email addresses or phone numbers

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< Developer Job Offers at Ircam >

Presentation of Ircam

IRCAM is a leading non-profit organization dedicated to musical production, R&D, and education in acoustics and music, located in the center of Paris (France), next to the Pompidou Center. It hosts composers, researchers and students from many countries cooperating in contemporary music production, scientific and applied research. The

main topics addressed in its R&D; departement are acoustics, psychoacoustics, audio synthesis and processing, computer aided composition, user interfaces, real time systems.

Modalys Developer

Applications

Please send your resume with a photo with qualifications and information preferably by surface mail with a manuscript letter to:

Hugues Vinet
directeur scientifique, IRCAM
1 place Stravinsky, 75004 Paris
France
Email: <vinet@ircam.fr>
Subject : Modalys developer position

Project Presentation

Modalys is a software environment for sound synthesis by physical modeling, based on modal description of vibrating structures. From the description of a number of basic objects (plates, strings, tubes, membranes, etc...) and nonlinear coupling interactions, it enables building "virtual instruments", whose sound can be synthesized from time-varying excitation parameters. Instrument programming is currently available to the user by means of a textual language (Scheme, LISP dialect), and through a graphical interface, Modalyser, developed in collaboration with University of Hertfordshire (UK) for the Macintosh. Modalys is written in C++. Its mainly used version is on the Macintosh. There is also a C implementation of Modalys for IRCAM's jMax real time audio environment, currently available on SGI/Irix and Gnu-Linux/Intel platforms. A 3D graphical interface for instrument programming, based on Java3D, is under development. Platforms to support in priority are the Macintosh and Gnu-Linux/Intel. See also :
<http://www.ircam.fr/produits/logiciels/log-forum/modalys-e.html>

Position Description

A one-year developer position is available from September 1999 in the Instrumental Acoustics Team. It may be further renewed. Task definition follows:

- Development and support of the Modalys software projet
- Addition of new synthesis features, including new object and
  interaction modeling and integration of new modal data
- Development of new graphical interfaces
- Porting on new computer platforms
- Communication with internal and external users for
  development specification and support, musical applications and
  derived products.

Required Profile

- Education : Physics and numerical computation, preferably with
  specialization in Acoustics. Basic knowledge in Digital Signal
  Processing. Computer scientists with good knowledge of physical
  models can also apply.
- Excellent programming experience in C /C++/Java on Macintosh
  (PowerPlant) and Unix systems.
- Experience in Computer Music

- Fluency in written and spoken French and English
- Autonomy, creativity, methodology, productivity for design and
  development
- Relational qualities for exchanges with users and other teams

Salary

According to background and experience

Audiosculpt Developer

Applications

Please send your resume with a photo with qualifications and
information preferably by surface mail with a manuscript letter to:

Hugues Vinet
directeur scientifique, IRCAM
1 place Stravinsky, 75004 Paris
France
Email: <vinet@ircam.fr>
Subject : Audiosculpt developer position

Project Presentation

Super Phase Vocoder and its graphical interface Audiosculpt is a sound
processing tool largely used by musicians at IRCAM and outside.
Differents kinds of processing can be performed such as : filtering,
time stretching, transposition, cross-synthesis and different kinds of
analysis such as: spectral envelopes, formants, pitch tracking ...
Super Phase Vocoder is available on Unix stations such as SGI, Dec
alpha, NeXT and on Macintosh platforms with a graphical interface
named AudioSculpt. The processing kernel is written in C and the
graphical interface is written in C/C++ using Code Warrior
developments tools . See also :
<http://www.ircam.fr/produits/logiciels/log-forum/AudioSculpt-e.html>
<http://www.ircam.fr/produits/logiciels/log-forum/superVP-e.html>

Position Description

A one-year developer position is available from October 1999 in the
Analysis/Synthesis Team. It may be further renewed.

Task definition follows:

Development of a new version of Audiosculpt from existing
specifications Support of existing versions of Audiosculpt on the
Macintosh and Super Phase Vocoder on Gnu-Linux/Intel and SGI/Irix
platforms. Communication with internal and external users for
development specification and support, musical applications and
derived products.

Required Profile

- Excellent professional programming experience in the Macintosh
  (PowerPlant) and C/C++
- Basic knowledge in Digital Signal Processing
- Experience in Computer Music
- Practice of the Unix environment
- Fluency in written and spoken French and English
- Autonomy, creativity, methodology, productivity for design and
  development

- Relational qualities for exchanges with users and other teams

Salary

According to background and experience

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                   |  ANNOUNCEMENTS   |
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< ISEA Meeting at Invencao >

Nina Czegledy
ISEA Board Member
Email: <czegledy@interlog.com>

Katarina Soukup
International Research and Relations
Editor, ISEA Newsletter
ISEA/The Inter-Society for the Electronic Arts
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Montreal, Quebec, H2X 2V1 CANADA
Tel: +1.514.847.8912
Fax: +1.514.847.8834
Email: <isea@isea.qc.ca>
URL: <http://www.isea.qc.ca>

ISEA Meeting at Invencao
Sunday 29 August, 1999
4pm-6pm
Itau Cultural Centre
Avenida Paulista, 149,
Sau Paulo, Brazil

We would like to invite all ISEA members, friends, and interested
parties planning to attend INVENCAO (Sau Paulo, Brazil, August 25-29,
1999) to an ISEA gathering during this event. The meeting, hosted by
ISEA Board member Nina Czegledy, will be an opportunity to network and
discuss ISEA projects. INVENCAO is organised by the Itau Cultural
Institute in collaboration with:

ISEA, Inter-Society for the Electronic Arts
<http://www.isea.qc.ca >

Leonardo/ISAST
<http://mitpress.mit.edu/e-journals/Leonardo/home.html>

CAiiA-STAR, Centre for Advanced Inquiry in the Interactive Arts,
University of Wales College, Newport and the Centre for Science
Technology and Art Research , University of Plymouth, UK
<http://caiia-star.newport.plymouth.ac.uk>

and supported by IDEA <http://nunc.com>.

Hope to see you there!

More information on INVENCAO itself:

INVENCAO
August 25-29, 1999

Itau Cultural Centre
Sau Paulo, Brazil
<http://www.isea.qc.ca/symposium/1999.html>
Email: <instituto@itaucultural.org.br>

INVENCAO is an opportunity for those working at the creative edge of
the arts, sciences and technology to collaborate in the
transdisciplinary development of ideas and innovative strategies for
life in the next millennium. Invencao is a "seeding" event that seeks
to identify key questions and issues that can lead to the radical
transformation of culture.

Just as artists increasingly work with the metaphors of science, so
scientists are employing forms of representation, such as
visualisation, which owe much to research in the digital arts. As art
is transformed by interactivity, so science increasingly recognises
the subjectivity of the observer. In turn, technology informs our
aesthetic and epistemological structures and is engendering new
processes of perception, communication and cognition.

INVENCAO will examine the consequences of this convergence of art,
science and technology on our sense of self and human identity, on
consciousness, community and the city, as well as on learning and
leisure.

The organising committee consists of: Arlindo Machado (chair), Roy
Ascott, Roger Malina and Alain Mongeau. The scientific committee is:
Diana Domingues,Claudia Giannetti, Eduardo Kac, Marcos Novac and
Margarita Schultz.

INVENCA0 place at the Itau Cultural Centre, Avenida Paulista, 149,
Sau Paulo, Brazil.
Blue Room and Red Room
10am to 6pm (panels and presentations of papers)
7:30pm to 9pm (lectures by the guest speakers)

To attend:

Send e-mail from July 10 forward to <invencao@itaucultural.org.br>,
with your complete name, phone and e-mail. Then, wait for a
confirmation notice. There is no registration fee. Once your
registration is accepted and confirmed, you can go to the INVENCAO
secretary from August 23 to the final day of the event and get an
identification card.

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< Call for Papers - Consciousness Reframed 2000 >

Kay Bosanko Sheady
Consciousness Reframed 2000
Conference Bureau
Email: <aces@newport.ac.uk>
URL: <http://caiia-star.newport.plymouth.ac.uk>

Consciousness Reframed 2000
art technology and consciousness
3rd. CAiiA-STAR International Research Conference
Centre for Advanced Inquiry in the Interactive Arts
University of Wales College, Newport.
23 - 30 August 2000

Director: Roy Ascott

Consciousness Reframed 2000 is a forum for developments in the field of art, technology and consciousness. Following the success of the 1997 and 1998 conferences (each of which attracted some 200 delegates from 23 countries, including 100 presenters), Consciousness Reframed 2000 will again take place at CAiiA, University of Wales College, Newport, 23-26 August, 2000. As last year, it will be followed by the Workshop "Interstices: the Architecture of Consciousness" at the Science Technology and Art Research Centre (STAR), University of Plymouth (28/29 August). Participation in the workshop will be limited to those presenting papers at the conference.

Call for Papers

Papers are invited from researchers in all disciplines who are involved in exploring through theory and practice inter-relationships between art, technology and consciousness. Researchers in the sciences, and the humanities, as well as the arts, are invited to submit.

DEADLINE: Abstracts (500 word maximum) are due by 5 November 1999

Submit your abstract as an attached document in Microsoft Word by e-mail to Kay Bosanko Sheady at <aces@newport.ac.uk>. Include in your submission the title of the paper, five keywords, full name(s) of author(s), institutional affiliation(s), and your mailing address, including email/phone/fax/and URL if applicable. (If Panels are proposed., give details of each panellist). Your abstract must be accompanied by a declaration of intention to attend the conference. Abstracts will be acknowledged on receipt and authors will be notified of acceptance by 20 December 1999

DEADLINE: Full Papers are due by 1 March 2000
Your paper (no more than 2500 words) will be required by 1 March 2000. Papers received after this date will not be published.

In order to be included in the Conference Programme, publicity and announcements, including the Website, the Registration Fee must have been paid by 12 February 1998.

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The LEA Word Wide Web site contains the LEA archives, including all back issues, the LEA Gallery, the Profiles, Feature Articles, Publications, Opportunities and Announcements. It is accessible using the following URL: <http://mitpress.mit.edu/e-journals/LEA/>

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