```
   /     ____
  /     /    /\
 /     /--  /__\
/_____/____/    \
```

```
                 _____
                |              |
                |  CONTENTS    |
                |_____|
```

==

```
          _____
          |                 |
          |  INTRODUCTION   |
          |_____|
```

< This issue >

Craig Harris

This month Roy Ascott provides us with his introduction to his
First International CAiiA Research Conference "Consciousness
Reframed: art and consciousness in the post-biological era". The
list of presenters for this event is fascinating, and we have
provided some selections in a PROFILE. Another PROFILE this month
provides information about a collection of presentations taking
place at the San Francisco State University Multimedia Studies
Program. They are providing a forum for several leading people in
the media arts to explore "Intelligence, Technology & ARTificial
Society - Who or what are we becoming?". And Roy Ascott finds his
way into LDR this month as well in an editorial "You ask me about
the Xingo Indians", along with book, video and exhibition
reviews.
Patrick Maun illuminates some of the concepts underlying the
recent transformation of the LEA web site. We have very positive
feedback so far, and some useful and constructive suggestions.
Patrick will continue to develop the LEA web site, and to inform
us about the design considerations. In addition, I am happy to
announce that Patrick is taking on the role of LEA Gallery
Editor/Curator. He will launch the new Gallery later in July, and
those of you who have visited the Gallery recently are aware that
he is actively seeking new works for presentation. Contact
Patrick at butoh@well.com to explore those possibilities.
Also next issue will contain an in-depth feature of a
panel/presentation exploring the impact of new media on public
art, created for the annual Americans for the Arts conference.
This will include profiles of artists and discussion about issues
relating to documentation and dissemination.
< LEA design statement >

Patrick Maun

The primary goals of Phase I of the Leonardo Electronic Almanac
redesign were to create a framework which could encompass the
large archive of existing material, as well as to allow for
growth for the future. Each issue of the Almanac consists of four
major areas: ARTICLES, GALLERY, PROFILES and PUBLICATIONS.
Content from each issue is placed into one of these areas. Over
the years, these areas have grown quite large to the point where
content from past issues has far outweighed current issues of the
almanac. The challenge was to create a site that presented the
large amount of material on the site, as well as showcased the
current issue of the Leonardo Electronic Almanac.
The first step was to break the site into small, easily navigable
areas. This was a fairly logical step that simply mirrored
existing areas. Secondly, a color was assigned to each of four
main areas, which in addition to the navigation bar found on
every page, allows the user to know at all times where they are
on the site.
The next step was to create a site within a site that would house
the current issue of the Almanac. This was accomplished through a
navigation box placed on the homepage and on all pages within the
current issue and allows users to quickly cross-navigate between
areas of the current issue.
Graphically the site was designed to be fast, clean and

functional. The homepage graphic borrows heavily from Leonardo's
Vitruvian Man, while incorporating elements from within the site.
The Almanac is fairly straightforward HTML; exploration into new
technologies will take place primarily within the future gallery
area.
Future phases of the redesign will tackle the issue of creating a
virtual gallery to showcase work and projects. This will be by
far the most challenging aspect of the redesign.
Bio for Patrick Maun:
Patrick Maun is an installation artist, videographer and
composer. He received a master's degree from the University of
Applied Art in Vienna, Austria after completing studies with
Peter Weibel, Steina Vasulka and Roy Ascott.
Patrick has been using the internet as artistic tool and medium
since the early 80's. His work has been shown in many festivals
and exhibitions throughout the world. He has received grants from
the Jerome Foundation, the National Endowment for the Arts, the
Austrian Ministry of Culture, the Canada Council, and has taken
part in two residencies at the Banff Centre for the Arts.
Patrick works as a digital artist and designer for advertising
maverick Fallon McElligott/Duffy Design. Through them, he has
designed websites for several Fortune 500 companies.
==

```
              _____
             |  FEATURE     |
             |  ARTICLES    |
             |_____|
```
< Introduction to Consciousness Reframed >
                              Roy Ascott

Roy Ascott
Director, Centre for Advanced Inquiry in the Interactive Arts,
University of Wales College, Newport
Caerleon Campus
P.O. Box 179
Newport, Wales NP6 1YG
E-mail: Roy_Ascott@compuserve.com
http://caiiamind.nsad.newport.ac.uk/
Interactions between art, science and technology are leading to
the emergence of new cultural forms, behaviors and values. It is
within the field of Consciousness that this is most marked and at
the same time least understood. I have convened this conference
in order to open up informed discussion of the issues this raises
and to examine what might broadly be called the technoetic
principle in art.
Our call for papers, issued largely on the Internet, brought in
some 148 proposals, the overall originality and excellence of
which enabled us to select nearly one hundred for presentation at
the Conference. The number, diversity and quality of these papers
should leave us in no doubt that "Consciousness" is indeed high
on the agenda of artists today just as it commands the attention
of contemporary philosophers, scientists and humanists. Not only
many disciplines but many cultures are involved, with speakers
and delegates to the Conference coming from Australia, Austria,
Brazil, Canada, Ecuador, France, Germany, Holland, Hong Kong,
Israel, Japan, Malaysia, Norway, Poland, Spain, Sweden, the UK,
and the USA, as well as from our 'virtual community' of CAiiA
researchers based around the world.
By bringing Art into conjunction with Consciousness we are
highlighting a trajectory in Western art that has its roots in
the very earliest part of this century, exemplified by the
conceptual impetus of Duchamp, the spiritual ambitions of
Kandinsky and the psychic urgency of Boccioni. At the same time,
we recognize the influence on contemporary art of other cultural
traditions, past and present, occidental and oriental, which seek

to understand the mystery of consciousness and to grapple creatively with its phenomena. 20th century art has been in many ways an attempt to make the invisible visible, to foster new processes of perception and cognition, to cultivate what we might call 'emergent mind'.

Technology, creatively and wisely applied, assists us in creating new ideas of self and society, just as the physical and biological sciences provide us with new models and metaphors of being, or as we might prefer to say, becoming. Telematic connectivity, the associative structures of hypermedia, virtual reality and artificial life, are just some of the new environments in which art and mind are explored and extended. We call this momentum post-biological, not to deny Nature its status but to signal the potency of these new technologies of mediation, construction and transformation in our understanding of consciousness and our perceptions of reality.

In seeking to provide a forum from which new ideas, practices and values can emerge, Consciousness Reframed is consistent both with the aims of CAiiA and with the needs of the larger international research community for whom issues of Art, Technology and Consciousness are of cardinal importance. The First International CAiiA Research Conference "Consciousness Reframed: art and consciousness in the post- biological era", takes place at the University of Wales College, Newport, on 5 and 6 July.

Ed. Note: Please see the profile of the CaiiA conference for a sample of abstracts, chosen from a much larger list of conference items.

==

```
         _____
        |              |
        |   PROFILES   |
        |_____|
```

< Consciousness Reframed:
art and consciousness in the post-biological era >
Roy Ascott
Director, Centre for Advanced Inquiry in the Interactive Arts
University of Wales College, Newport
Caerleon Campus
P.O. Box 179
Newport, Wales NP6 1YG
E-mail: Roy_Ascott@compuserve.com
http://caiiamind.nsad.newport.ac.uk/
ABSTRACTS (chosen by the editors of LEA from a much larger collection)

Perception of Individual Time

Susanne Ackers
University of Skoevde
Department of Humanities
PO Box 408
S- 541 28 Skoevde, Sweden
Email: susanne.ackers@ikm.his.se
Keywords: Liberal Arts, Perspective, Immanuel Kant, Erwin Panofsky, Char Davies

In 1927, the art historian Erwin Panofsky investigated perspective as a symbolic form in painting. He claimed that the first example of a coordinate system was developed "in an artistically concrete sphere, well before it had been postulated by abstract mathematical thought." For the medium of painting, this might be true, but what about other mediums?

The focal point of this paper is the correlation between art and mathematics. In the context of the Liberal Arts, geometry played a crucial role in the development of Gothic architecture. Today,

we easily perceive numerical harmonies in a cathedral's facade or interior space. What about our perception of the numerical harmony in digital images?

Our ideas of time and space are still shaped by the Kantian categories of space and time. As such they influence our perception of real space. A change of perception took place around 1800, while Kant was developing his theories. An increasing interest in nature as an object of scientific inquiry lead to changes in the way that nature was represented in works of art. Perspective - as an element of landscape painting - became obsolete. The *impressionistic* visualization of light reflections served as multiple viewpoints.

While the visuals in Char Davies' *Osmose* can be seen in the context of pictorial tradition, the dimension of time is an addition which has only become possible by the complex use of numbers, and of computer programming. Here, perspective is perceivable as individual time. A constant need for positioning within the dimensions of time and space creates an aesthetic experience which irritates our common sense ideas of space and time. Can this aesthetic experience be explained by relating it back to the use of numbers?

The Bush Soul: Traveling Consciousness in an Unreal World

Rebecca Allen
Chair and Professor, Department of Design
Co-Director, Center for the Digital Arts UCLA
1300 Dickson Art Center, UCLA
Los Angeles, CA 90095
Telephone: (310) 825 0925
Fax: (310) 206 0206
E-mail: rallen@arts.ucla.edu

Keywords: artificial life, avatar, virtual reality, consciousness

We are told that in the not so distant future we will spend hours immersed in three-dimensional virtual worlds. These worlds will include "avatars"; virtual representations of ourselves in the form of computer generated characters. Our soul, our consciousness will somehow be embodied in an avatar. The avatar becomes our other body, another container for our spirit.

But how do we define the relationship one has with his or her avatar? Do we control it like a puppet, or is an avatar like a child, containing the spirit of its parents, but with its own set of behaviors? What part of "us" is in our avatar and how do we identify with it? Is part of our soul in this computer-generated character?

The former assistant of psychologist Carl Jung, C.A. Meier, equates the soul to our most intimate identity, our conscious ego (Meier 1986). When writing about the localization of consciousness Meier refers to the observations of Mary Kingsley, an ethnologist who lived with West African tribes in the 1890's. Kingsley pointed out that West Africans believe a person has more than one soul and that there is a certain type of soul, called the "bush soul" (Kingsley 1899). A bush soul dwells within a wild animal of the bush. A person's bush soul lives inside an animal, though that animal also has a life of its own.

An avatar could serve as a place for the bush soul, following the guidance of the person attached to it but "alive" with is own set of behaviors. With a team of computer scientists and designers, I am exploring the role of the avatar as well as the aesthetic issues involved in the creation of a virtual environment that is alive and responsive. We are designing and building a PC-based system, called "Emergence", that will support an active, responsive, networked, virtual world.

Virtual environments and their inhabitants are rendered in real-

time as three dimensional, texture-mapped polygons. The users (which we call "participants") are represented as articulated three dimensional avatar models. An avatar is viewed from the third person point of view which allows one to observe its actions.

Though we will allow for conversation with voice input, we are most interested in forms of communication that rely on symbolic gestures, movements and behaviors. Our focus is on motion, the "life" of the environment, and the role of artificial life in the creation of an art form which includes the interactive experience.

In our world characters lead artificial lives by following a set of behaviors. These behaviors are defined through a "behavior scripting language" that we have developed. This allows us to create characters whose behaviors emerge from a series of parameters. These characters can "live" in a virtual environment with their own unique characteristics. In the case of the avatar, its behavior is combined with input from the participant, direction in navigation for instance.

Many cultures believe that everything, even inanimate material has some form of a soul. We carry this idea into our virtual world where every object in the environment is instilled with some form of artificial life. An object, driven by its internal code or in response to its environment, may change its shape and color, it may make a sound, and it may gradually begin to move or suddenly jolt to a stop.

Therefore, this world allows for relationships to be formed between all elements. Movement and interaction enhance the emergence of a rich environment populated by engaging inhabitants. An intriguing place for a traveling bush soul.

(The first phase of this work, titled "The Bush Soul", is funded by a grant from Intel Corporation.)

References:
Kingsley, Mary 1899. West African Studies. London: Macmillan and Co., pp. 199-209.
Meier, C.A. 1986. Soul and Body. San Francisco: The Lapis Press, pp. 268-277.

Somatic Ventriloquism: Throwing the Body, Distributing the Self
----

Toni Dove
115 West Broadway
NYC NY 10013, USA
Email: Tdove@aol.com

"...the problems in imagining the body are symptomatic of the problems in imagining the self as place, object and agent at once."
Susan Stuart On Longing

The development and evolution of an interactive narrative installation, Artificial Changelings, has led to some thoughts and questions:

When Lumiere's train pulled into the station and people in the theater screamed and ran they did not really believe the train was real, that they would be run over in the dark, but the experience gave them the thrill of danger without the threat of actual harm. The pleasure produced by this circumstance is impossible to overestimate. Is this another form of the Pygmalion story? The desire to turn stone into flesh is the desire to bring sculpture or the product of creativity into life with us. In film and it's later mutations into immersive and virtual spaces we are trying to step out of life into the movie. Throwing the body - projection into a virtual space. The longing for oblivion and the alchemies of escape(ism?) that transform material to meaning and back again seem to be at our fingertips as we cross back and

forth over the liminal spaces of the virtual frontier.
How do we "throw" our bodies into an immersive space? Does a
relationship between the interactive viewer or user and the
virtual body of a character on a screen become a POV experience
or one of manipulation, like a puppeteer - do we identify and/or
inhabit? Does the experience of the body in physical space, the
sensual dimension, pull against the linearity of time? How is the
out of body experience relevant to virtual space? Synesthesia:
the re-emergence of the body in virtual space via multiple
displacements? If popular film is mutating into a fusion of theme
park ride and rock video, and language in this context is
replaced by somatic engagement and shock, what kind of strategies
replace the more traditional character driven narratives? How gas
and mutation act as models for storytelling structure. Fluid
experience - the cut versus the continuum and the somatic power
of virtual illusion.

Ritual and the Virtual

Mark Pesce
Chairman & CTO, BLITcom
1505 9th Street #308
Santa Monica, CA 90401 USA
Email: USAmpesce@sirius.com

In its primary fictive invocations by Vinge, Gibson and
Stephenson, cyberspace has consistently been apprehended in terms
of mythology; it seems that the open-ended nature of cyberspace,
with its intense mutability and possibility causes us to reach
back into the human past in search of a frame for our own
expectations. Cyberspace can be depicted as "dream-time" or
"faerie" because it has so many qualities in common with it; in
fact, the differences between cyberspace and the spaces of
magical reality are primarily semantic, cosmetic marks which
partially obscure an underlying unity.
Sheldrake's hypothesis of Formative Causation may provide some
indication of a mechanism behind this isomorphic resonance; the
forms of magical reality, ancient to humanity's beginnings, shape
our vision in the unbounded void of electronic potential. More
than just a simile, we recognize that we have been here before,
when we first became human, first stretched our minds to
encompass the narratives of the universe, the stories of reality
which, in an autopoeic circularity, created the science that lead
to the birth of the electronic age.
In a world of unbounded complexity, human beings compress and
complexify symbols into the barest essentials of meaning; in this
way, the ancient narratives became myths. In this, our mythical
reaction to cyberspace represents yet another retrieval; we
intuitively understand that myth represents our best defense
against the "riot of factuality" - we can comprehend in an
archetypal shorthand things that extend far beyond our
understanding when made explicit.
Ritual, the language of magical reality, becomes the language of
cyberspace, the interface of being unbounded, constraining the
infinity of possibility into a precise action with comprehensible
results; ritual acts as a focal point of thought-form. We see
this in the primary archetype of cyberspace as ether and the
Akashic container of all knowledge; lately we project the
entelechy of the biosphere into it, to find Noosphere in its
chaos. Perhaps none of this is true; but when we face into the
void of cyberspace, we see both angels and devils. The virtual
world directly reflects the assumptions which underlie our
thinking, and illuminates the magical reality of all human
narratives.

Title: Dynamic Spaces:
    Interactive Art in Large-Scale Public Environments

Miroslaw Rogala
CAiiA and Carnegie Mellon University, Pittsburgh USA
329 West 18th Street, Suite 900
Chicago IL 60616 USA
Telephone: 312-666-0771
Fax: 312-666-0772
E-mail: rogala@mcs.com
URL: http://www.mcs.com/~rogala/home.html

Keywords: art, media, interactive, personal spaces, public spaces
This artist presentation advances creative interactive work in
public spaces as an intellectual/ philosophical investigation
into the processes of creation and participation in technological
media arts in the late 20th century.

This multimedia presentation into the specific attributes of
interactive art in public places is set in a larger context which
engages with the role of randomness and predictability in the
movement of people through public spaces; issues of control in
self- directed experiences, and the relationships between
physical and psychological space.

INTERACTIVITY IN LARGE-SCALE PUBLIC ENVIRONMENTS "Electronic
Garden/ NatuRealization" (Rogala 1996), a large-scale, public
interactive installation was undertaken as a part of " Re-
Inventing the Garden City", sponsored by Sculpture Chicago. Daily
observation and periodic documentation (video, photography) was
conducted over the 6-month period of the installation.
Questionnaires, "round-table" discussions, and focus groups have
also been constructed to engage meaningful feedback. This was an
opportunity to apply initial principles of theory and research
into practice. Through this development of on-site practice, a
relevant base was produced for further research into the form of
an on-line installation (http://www.mcs.net/~rogala/ eGarden)
with feedback from global communities engaged through the
Internet website.

The installation emphasizes the relevance of the physical body to
interaction and participation in public artworks. While previous
work in media arts has emphasized the temporal dimension, little
attention has been paid to space, to the behavior of the body,
and to the implications of interactive systems for new kinds of
spatial experience. This initial project has outlined the
direction of interaction within large-scale public environments.
Concepts of responsibility, freedom, and choice are central to
the interactive model in group dynamics. Through the use of
practice, research and evaluation, factors began to define
components contained in complex and dynamic systems, which enable
large groups of participants (3000 weekly); in a sustained (e.g.,
5-10 minutes, daily visits, return visits, loggings into website)
interactive relationship with the artworks produced.

Although a certain lack of distance is reflected in the context
of interactive art and video art, and more recently in computer
arts, the role of the artist has changed significantly, gaining
independence from traditional art language, and becoming an
active participant in societal change, rather than being a
commentator on the outside. This in turn suggests that
interaction may be possible not only between participant and
device, but also between participants, and between participants
and creators.

The artist will present excerpts from his interactive
installation and CD-ROM work, LOVERS LEAP (1995), and DIVIDED WE
STAND (1997- 1998), a forth-coming audience interactive media
symphony in six movements.

References:

Bauer, W. (1996) Age of the Data Poets. On the Reconnection of
Science and Art. Flash Art Magazine Vol. XXIX No. 190, pp. 59-62
Negt, O. & Kluge, A. 1996. Public Sphere and Experience.
Minneapolis: University of Minnesota Press.
Pile, S. and Thrift, N. 1995. Mapping The Subject: Geographies of
Cultural Transformation. London and New York:Routledge.
Sommer, A. (ed.) (199 5) Artintact 2 , Artists' Interactive CD-
ROMagazine. Karlsruhe: ZKM /Center for Art and Media and Cantz
Verlag.

Emergent Constructions:
    Re-embodied Intelligence Within Recombinant Poetic Networks
----

Bill Seaman
CAiiA and University of Maryland
University of Maryland,
Baltimore County
Department of Visual Arts,
5401 Wilkens Ave.
Baltimore,
D21228-5398
Email: USAseaman@umbc.edu

Computer-mediated networks present an artistic medium which
heightens the potential for an intermingling of the knowledge of
the viewer with the "Re-embodied intelligence" of an author or
authors. We will consider "networks" in an all-inclusive manner,
from the scale of a network of poetic elements within an artwork,
to that of the World Wide Web. Such computer-mediated
environments can potentially facilitate new forms of inter-
authorship. These environments enable the user to engage with the
"artefacts" of the consciousness of the author. Central to the
interaction is an emergent experience, which is not know in
advance by the author, and is unique for each subsequent viewer.
Given that computers can house "recombinant" digital elements of
image, sound, and text, how can the artist become an "author" of
responsive, self regulating systems which enable "intelligent"
emergent poetic responses to viewer interactivity via the
encoding, mapping and modelling of operative poetic elements? How
can such an environment enhance or trigger particular "states" of
consciousness in the viewer? To what extent can we "re-frame"
aspects of the consciousness of the artist, via specific modes of
"translation" of poetic elements of image, sound and text, within
operative computer-mediated networks?
There is an increased interest in interactive art works that
exhibit "intelligent" responsiveness to viewer input. In Thinking
Machines, The Search for Artificial Intelligence by Igor
Aleksander and Piers Burnett, the authors state:
"Rather than becoming embroiled in the controversies which
surround the nature of human intelligence, the practitioners of
artificial intelligence have generally chosen to define their
goals in empirical or operational terms rather than theoretical
ones. An intelligent machine, they suggest, is able to do things
which, if done by people, would be judged to require
intelligence. On this basis, a definition of intelligence becomes
unnecessary: The researcher simply chooses a task that seems to
require intelligence (playing chess say or recognizing visual
images) and tries to build a machine that can accomplish it."
(Aleksander, p13)
My research explores computer-mediated re-embodied intelligence
in the context of a new form of poetic construction which I call
"Recombinant Poetics." Art works which explore "Recombinant
Poetics" are characterized by the interaction of a viewer with a
system of meaning which carries compressed potential meaning
constructed of language, image and sound elements within an

engendered technological environment.

The term 'Recombinant Poetics' was created by the author in 1995. 'Recombinant' can be defined as follows, "Any new cell, individual, or molecule that is produced in the laboratory by recombinant DNA technology or that arises naturally as a result of recombination". (Parker) Recombinant DNA technology can be defined as follows, "In genetic engineering, a laboratory technique used to join deoxyribonucleic acid from different sources to produce an individual with a novel gene combination. Also known as gene splicing." (Parker) Recombinant Poetic networks embody the metaphor of recombinant DNA via the computer-mediated recombination of operative poetic elements. Emergent content is explored through poetic construction mechanisms and subsequent navigation by the viewer.

Back to Being: The Mind in the Body and the Body in the Mind

John A Waterworth
Department of Informatics
Umea University
S-901 87 UMEA, Sweden
Telephone: +46 90 166731
Fax: +46 90 16 65 50
E-mail: jwworth@informatik.umu.se
URL:http://www.informatik.umu.se/~jwworth

Keywords: Being, Mind, Body, Concrete, Abstract

Consciousness integrates two streams of mental information processing: the concrete (concerned with functional existence in the physical world) and the abstract (concerned with the mental world of ideas, including plans and strategies for concrete events). Consciousness shifts between the two streams, but the streams are not entirely competitive for conscious attention since each supports the other. It is widely accepted that abstract mental activity (of the kind that distinguishes people from most animals - see Waterworth, 1996) allows us to act more effectively than we otherwise would, on the assumption that the purpose of thought is to increase the effectiveness of action. But it is also the case that we use bodily movement and the physical environment in which we find ourselves to support mental activity. To some extent, then, the mind is in the body.

Mental activity makes no sense without a body. This is not merely to say that thoughts would be irrelevant without a body to act them out; that is a problem that technology could presumably solve. I am not saying that thoughts have no meaning except by reference to bodily action, but that meaning relies ultimately on bodily experiences - what it feels like to be a body in the world. This view, taken from Lakoff and Johnson, is summed up by the title of Johnson's (1987) book 'The Body in Mind'. A body of theory encapsulates knowledge derived from abstract reasoning. Knowledge about concrete reasoning is encapsulated in an actual, live, human body.

With Virtual Reality, we make tangible the intangible, "concretise" the abstract. Concretisation means that what was once thought about in an abstract way can now be experienced directly, through physical action and associated emotions. This brings a profound change to our perception, and emphasizes that, however useful it may be for action (and the pursuit of objective truths), mental life also has the purpose of experience, of a sense of being. VR expands perception at the expense of cognition. The burden of abstract-to-concrete mapping, which is at the heart of cognition, is shifted from consciousness to the VR system itself, and the possibilities of what we might be conscious are expanded. This expansion opens the door to technological support for human creativity. Until the advent of

VR, introducing information technology has implied the exclusion of sensation, emotion and imagination (a focus on doing rather than being). Now however, we are reversing this trend, and rediscovering our embodied selves in the process.

Johnson, M. 1987. The Body in the Mind. Chicago: University of Chicago Press.
Waterworth, J. A. 1996. Virtual Reality for Animals. In Proceedings of Ciber@RT'96, First International Conference on Virtual Reality (Valencia, Spain, November 1996). In Press.

****

< Intelligence, Technology & ARTificial Society
                         Who or what are we becoming? >

San Francisco State University
Multimedia Studies Program
425 Market Street
San Francisco, CA, USA, 94105
Information: (415)904-7740
Tickets: (415)978-2787
http://msp.sfsu.edu

What happens to our sense of community and identity when we can fabricate a personality at the speed of light? As vast, global communications networks connect us in virtual spaces, the nature and breadth of our communication is forever altered. While opening up pathways never before imaginable, these developments place immense stress on the foundations of culture and society. How do we create new designs for living and coping in such a period of rapid change? What tools can be created to help people adapt in a way that truly enhances their lives? How will artists use these tools to change the nature of human experience?

Join us as we bring some of the brightest minds in this exciting new medium to discuss, describe, debate and perhaps even shape the future of being human in the digital age. The NTT New Media Minds Forum will explore the possibilities before us as the physical environment, human nature and the virtual world collides.

In connection with this forum, the SFSU Multimedia Studies Program will launch the New Media Institute. Its' mission is to develop a broader understanding of how new media technology impacts society and culture, while conducting explorations on how it can be used in more practical, humane and creative ways for living and learning.

PROGRAM:
Jaron Lanier - Thurs., Sept. 11, 7:30pm, Center for the Arts Forum Yerba Buena Gardens
"A Cyber-Feminine Perspective" with Esther Dyson, Linda Jacobson, Denise Caruso and Soledad O'Brien - Thurs., Sept 25, 7:30pm, Center for the Arts Forum Yerba Buena Gardens
Thomas Dolby - Thurs., Oct. 9, 7:30pm, Center for the Arts Forum Yerba Buena Gardens
"Virtual Communities and the Worlds They Live In" with Linda Stone, Mark Pesce, Char Davies, Sandy Stone, Gail Williams and Bruce Damer - Weds., Oct 22, 7pm, Center for the Arts Theater Yerba Buena Gardens
Special thanks to NTT for their foresight and vision in sponsoring this Forum.

BIOS:

Thurs., Sept. 11
Jaron Lanier

Jaron Lanier is a computer scientist, composer, visual artist, and author, but best known for his work in Virtual Reality, a term he coined. Jaron co-invented fundamental VR components such as interface gloves and VR networking and was the first to

propose and implement a variety of technologies that have since
spawned industries in their own right.
Jaron's love for virtual reality stems from the notion that
computers could provide a way for people to share their
imaginations in new ways. He seeks to create a world that's
"fully objective like the physical world but also completely
fluid like the imagination."
While his work as a computer scientist has garnered him wide
recognition, music is Lanier's first love. He has been an active
composer and performer in the world of new classical music since
the late seventies. "Musical instruments have often been the most
advanced technologies around, sometimes surpassing even the tools
of war... As the most eloquent machines, instruments predict the
future of culture, when we will communicate increasingly through
machines."

Thursday, September 25th
The Cyber-Feminine Perspective

The dynamics of Internet communities has led us to reframe many
long-standing issues regarding gender. What happens to the
concept of feminism in cyberspace? How are women using new media
differently? In this interactive discussion we explore the work
and thinking of women who are having a significant impact on the
direction of new media.
Esther Dyson
Esther Dyson has been described by her peers as "the First Lady
of Cyberspace," and "the smartest person in the computer
industry." As President of her own venture capital company,
EDventure Holdings, and chairman of the Electronic Frontier
Foundation, she is known for her insightful analysis as well as
her ability to stand firm to protect basic rights.
Denise Caruso
Denise Caruso is a writer and New York Times columnist with a
remarkable reputation for making sense of technology from a big
picture and humanistic perspective. She is quoted in John
Brockman's "Digerati" as saying, "Women are very involved in the
Net. They are invisible only because women are invisible in this
culture...You will see more and more women using the Net as a way
to command power."
Linda Jacobson
Linda Jacobson has several identities. She is a widely known
technology journalist, consultant and speaker. She is Silicon
Graphic's Virtual Reality Evangelist and she is the digital
character RiGBy in the band D'CuCKOO, a group of women skilled in
high tech methods of making music and sounds in high energy live
performances.
Soledad O'Brien
Soledad is the anchor for the MSNBC television show "The Site."
There she interviews and discusses current developments with
leading figures in the world of cyberspace. Soledad has been
writing, producing or reporting in the television business for 9
years. She will moderate our discussion.

Thursday, October 9th

Thomas Dolby Robertson
Dreams of falling- dreams of flying. A man who never dreams goes
slowly mad. The dawn of science, the age of reason. This is the
voyage of the mind's eye. Thomas Dolby from "The Gate to the
Mind's Eye" soundtrack.
Thomas Dolby Robertson's career was, until the early 1990's,
purely musical. His 1982 hit "She Blinded Me with Science" --
from his album entitled The Golden Age of Wireless -- was one of

the tunes that helped formulate music videos for a new
generation.
Dolby's long relationship with technology stems from his work
with synthesizers in the late 70's. This work has since evolved
into something much more profound. Recently Dolby created the
first audio-based virtual reality installation at the Guggenheim
Museum SoHo in New York entitled, 'The Virtual String Quartet'.
The sold out exhibit earned him a Computer World Smithsonian
Award nomination.
Through his company Headspace, Dolby is now intent on creating
tools that allow artists to create in a truly interactive
environment and music which could change as a user's experience
changed. "Today, entertainment is totally one-way and the
individual has no effect on the experience whatsoever...It's
really the first century that entertainment has been like that.
Five hundred years ago, you sat around a campfire and told
stories... What we're getting back to with the internet is a more
natural state of affairs, with the sense of immediacy I feel when
I'm playing my songs for a live audience."

Wednesday, October 22nd
Virtual Communities and the Worlds they Live in

In William Gibson's "Neuromancer" and Neal Stephenson's "Snow
Crash" Cyberspace is portrayed as a digital landscape inhabited
by millions of people. In the mid 1990's this vision started to
become real. Forum panelists will tackle key questions about the
future of community on the Internet and the kinds of virtual
worlds being created. Will Cyberspace remain just an interface or
will it start to feel like a "real place"? How will life in
digital space impact society "here on the ground"?
Linda Stone
For over a decade, Linda has been a leader in the effort to
create both community and content on the computer, specifically
focusing on improving human social interactions in cyberspace.
She created and now directs Microsoft's virtual worlds team which
develops technologies for the construction of social environments
that really work on a human level.
Mark Pesce
Mark Pesce is an Internet visionary and co-creator of VRML
(Virtual Reality Modeling Language). What started as a vision of
3D information on the Internet has blossomed into the reality of
a true Cyberspace under his guidance.
Char Davies
Char Davies is the creator of Osmose, a virtual environment
described as a digital meditation space. It incorporates a
stereoscopic head-mounted display and a "motion-capture" vest
with a breathing and balance sensor. An artist and director, Char
is currently the Director of Visual Research at Softimage in
Montreal.
Sandy Stone
Sandy Stone defines her research as "the traffic in the
boundaries between art and technology," which includes
interaction theory, cyberspace, virtual systems, gender and
sexuality. She is a performance artist and currently teaches at
the Department of Radio- TV- Film at the University of Texas at
Austin.
Gail Williams
Gail Williams has been called a gardener of community in her role
as Director of Conferencing for the Well, perhaps the most
infamous and influential on-line community in the world.
Bruce Damer
Bruce is a pioneer of Avatar Cyberspace and an expert on the
subject of virtual community. He has helped create forums for the

emergence of virtual worlds including the Avatars '97 Conference
occurring Oct. 22-24, in San Francisco. Bruce will moderate our
discussion.
===
```
       _____
      |                                |
      |  LEONARDO DIGITAL REVIEWS   |
      |       June      1997        |
      |_____|
```
Editor: Roger Malina
      Coordinating Editor: Kasey Rios Asberry
        Editorial Advisors: Chet Grycz, Judy Malloy, Annick
Bureaud,
                  Marc Battier, Curtis E.A. Karnow
Review Panel (includes): Rudolf Arnheim, Wilfred Arnold, Marc
Battier, Robert Coburn, Mary Cure, Shawn Decker, Tim Druckrey,
Jose Elguero, Michele Emmer, Josh Firebaugh, Eva Belik Firebaugh,
Geoff Gaines, Bulat M. Galeyev, George Gessert, Thom Gillespie,
Francesco Giomi, Tony Green, Molly Hankwitz, Istvan Hargittai,
Gerald Hartnett, Paul Hertz, Curtis Karnow, Richard Land, Roger
Malina, Diana Meckley, Axel Mulder, Kevin Murray, Youri Nazaroff,
Joseph Nechvatal, Simon Penny, Clifford Pickover, Harry Rand,
Sonya Rapoport, Kasey Rios Asberry, Jason Vantomme, Misha Vaughn,
Rainer Voltz, Christopher Willard, Barbara Lee Williams, Stephen
Wilson
===
< Editorial: You ask me about the Xingo Indians... >
Roy Ascott
Editorial Advisor
E-mail: Roy_Ascott@compuserve.com
The Kuikuru effect
we have smoked with the Page
floating above the Mato Grosso
Urubu was the bird that brought fire to Xingu
we brought him cyberfire
he gave us the traditional dish of mandioca
we ate bijou
we brought him the satellite dish of telecom
the gift was a giff
he will weave his dreams into our net
we are enmeshed in his space
his avatar is dynamic (he is jaguar)
the computador must not be a conquistador
our datastreams are tributaries of the Xingu
in the lake, toucan is touched best in reflection
all bodies leap, the fish are linear.
at the sacred shore, let dead bones lie
shift the soil and you'll be torn apart
the shaman huffed and puffed
he entered the wormhole
his words came from the sky
click on any star
we spilled ashes on his laptop
he buried the twins alive
the unusual is unwelcome
mismatched is dismembered
around this plaza
only the best bodies survive
for Kuikuru, the flesh is cybernetic,
seeking to embody
the perfectibility of systems
all else is wasted
(underfoot, the buried cries)
in the body of the text the word is made flesh

history is painted in red and black
from the head down
around the neck and wrists, the teeth of wild voices
all souls have their ma'mae
they danced two days for no one's attention.
in the men's house, the flutes can be heard but not seen
the Jacui speaks through the body
(this too is the meaning of Macumba)
for the spirit to rise we must stamp the earth
we sought ayhuasca in the circle of Santo Daime
in another jungle
the soul of the plant de-computes the body structure,
dis-aggregation is palpable
every molecule becomes a star, neuronal maps are unfolded,
all thoughts are light
the brain is a sky
heavily constellated
we throw up
we sought ayhuasca in the Union of Vegetal
it was inconspicuous
that way truth lies.
****

< Book Review: Duchamp, Passim >
A Marcel Duchamp Anthology
Edited by Anthony Hill.
G+B Arts International Limited, Sydney, 1994.
187 pp., illus. Cloth, USDLRS 75, Pounds Sterling 43
ISBN: 976-8097-78-7
Reviewed by Douglas Kahn
E-mail: Douglas.Kahn@uts.edu.au

An anthology may serve any number of purposes toward its topic or
field. Some create and announce new beginnings, for instance,
Jerome Rothenberg's anthologies starting with _Technicians of the
Sacred_ (1968) which helped establish the field of ethnopoetics;
most report on new developments of an already well established
area of investigation. Anthony Hill's anthology _Duchamp: Passim_
inhabits yet another category: it sweeps up the rear. This is not
a criticism--one can never judge an anthology by its function--in
fact, for anyone with an intermediate level of interest in
Duchamp it would be very useful, and it should definitely be in
every university and art school library.
The book adds nothing of import to present knowledge about
Duchamp: it recaps. I'm not a Duchamp scholar, but the only
entries of substance I had not already seen were one by Frederick
Kiesler from 1937, one on Kiesler and Duchamp, some material on
chess, and an interview with Hans Haacke. The book is
nevertheless a labor-saving device, a filing cabinet turned into
a new appliance, collecting materials from a time in which
knowledge about Duchamp was developed. The timeframe for the book
is primarily England during the 1970s, with a number of entries
deriving straight from a special Duchamp Supplement in _Studio
International_ in 1975. Hill, who is a well-known British
constructivist artist and writer, edited this Supplement from two
decades ago, a long-held dedication which can be sensed
throughout. However, in this case dedication has lead more
toward the enthusiasm of the collector over each and every item
no matter how disparate, instead of the comprehensive and
discriminatory labors of the scholar.
Some of the contributions remain valuable, for instance, the
British composer Gavin Bryars' essay on Duchamp's music, which
appeared originally in 1976 in a special issue of _Studio
International_ on experimental music, whereas others can only be
rationalized as a gauge of the reception of Duchamp in the U.K.
at a particular point in time, e.g., Jindrich Chalupecky's essay

reprinted from the Duchamp Supplement, the longest essay in the
collection, has not aged well--through no fault of its own, only
through subsequent efforts of other scholars and critics and
because attention given to, say, structuralism or the position of
Art and Language members is no longer seen as pressing problems
on the theoretical agenda. Of course, one could imagine a
valuable anthology which looked at the diffusion and reception of
Duchamp among artists and others over time; the scope could be
systematically focused on the U.K. or extended to other
countries. _Duchamp: Passim_, however, is fairly confused about
its topic; while having so much specific to the U.K. it tries to
open to a more general interest in Duchamp without sufficient
resources to do so.
My main criticism of the book is that it is simply overproduced.
The stated rationale for its size is the desire to reproduce
Duchamp multiples and other documents as near the size of the
original as possible. This too could be a worthy project, but it
would have to be more than a very small sampling. The needs of a
few documents cannot justify catapulting so many magazine
articles into coffee table format, especially when there are bona
fide coffee table books with better reproductions of a greater
range of Duchamp's works. Everyone would like to see the greatest
hits from their filing cabinet beautifully bound, but it might
overshoot the personal resources of the audience who might most
benefit.
As to the relevance of Duchamp for readers of Leonardo who may
not have gotten around to investigating his ideas, please resist
growing impatient with the hermetic and daffy character of his
work, but it would be tantamount to a writer balking at the
difficulty of James Joyce or underestimating the power of a good
pun. Per the latter, early in the century most clothing, like
bread, were articles of domestic production. Duchamp walked the
streets of New York when they first started becoming mass-
produced and noticed an advertisement in a shop window for
"ready-mades." Here is one pun that made good. His work is
especially relevant to Leonardo readers as it pertains to the
relationship between art and science/technology/mathematics
since, although I cannot develop this statement here, Duchamp's
approach (along with Alfred Jarry, Raymond Roussel, Guillaume
Apollinaire) was a defining moment among the possibilities still
with us at the end of the century. _Duchamp: Passim_ is not an
appreciation of Duchamp on this basis, but would nevertheless be
complementary. I would suggest those readers with limited
discretionary funds start saving up for Linda Dalrymple
Henderson's groundbreaking book on this very topic, forthcoming
from Princeton University Press.
****
< Video Review: There. Here:
    Visions from the periphery of the New World >
Pepino Mango Nance by Bann Roy & Gillian Goslinga
O No Coronado by Craig Baldwin
Work by Melinda Stone
Xich-Lo by M. Trinh Nguyen
2 for 1 by Nuno y Morales
CVTJ by Daniel W. Gorrell
Artists Television Access
992 Valencia
San Francisco CA 94110
Friday, June 13, 1997
Reviewed by Kasey Rios Asberry
E-mail: kasberry@humanorigins.org
On the borders, at the margins, of countries and peoples the
focus tends to be blurred. No one sharp, definitive meaning
prevails. The ambiguity itself becomes a meaning. In this time of

the flux of whole populations over artificial borders tremendous
energy is being released into culture even while it is often
squandered. Artists Television Access gathered up some of this
raw energy and focused it on their storefront audience in San
Francisco's vibrant Mission District, showing six short videos,
16 & 8 mm films on Friday the 13th. Yes the show started way late
and the projector was quirky but the room was rapt and
overflowing, there were some brilliant moments.
Of particular keenness were the lush Xich-Lo (Cyclo) by M. Trinh
Nguyen about her attempt to return to the Viet Nam she left as a
child and Pepino Mango Nance by Bann Roy and Gillian Goslinga
which documents a composer's response to his neighborhood sounds
(especially the street vendors) in East Los Angeles. The evening
was stimulating though nothing about it was polished, a message
from the frontier full of passion worth paying attention to
precisely because it was so distinct from the corporate aesthetic
that often seems to rule contemporary expressive arenas. ATA
deserves some recognition for making these less-funded visions
consistently available over the last ten years.
****

< Book Review: Kant After Duchamp >
Kant After Duchamp
Thierry de Duve,
Cambridge, MA: MIT Press, 1996. xv +
484 pp. Cloth.
Reviewed by Mark A. Cheetham
e-mail: cheetham@julian.uwo.ca
Thierry de Duve closes his long book with a seemingly innocent
and simple claim: "I guess I am trying to understand why Marcel
Duchamp was such a great artist" (462). Not all artists and
historians share his judgment of Duchamp - Robert Smithson and
Clement Greenberg stand out as dissenters - but perhaps today all
those concerned with the visual arts and its theories would agree
that understanding Duchamp is both necessary and anything but
simple. Indeed Kant After Duchamp is an intricate book, a
collection of essays published and rethought over quite a few
years that demands and rewards careful reading. That reading
should begin with the arresting title. We all know that
chronologically, Kant does not come after Duchamp. Yet artists,
critics, and especially de Duve do re-read Kant after Duchamp's
essential work with the readymade. Methodologically, then, Kant
does come after Duchamp and we re-read the patterns of Modernism
as they have been set by both these figures. De Duve argues
convincingly that within Modernism, Duchamp forever changed
specific questions about artistic quality and medium - "Is this a
good painting?" - to generic questions: "Is this Art?" After
Duchamp - though not until the 1960s and 1970s - one is an
artist, not a painter or sculptor. And here lies one link with
Kant.
"What remained to be understood in Duchamp's aftermath," de Duve
reasons, "was that 'this is art' continues to be an aesthetic
judgment in the Kantian sense, not in the sense where it would
remain a judgment of taste... but in the sense that it requires
one to suppose that everybody is endowed with the faculty of
aesthetic judgment" (453). "Everybody." The universality of
judgment itself - not of local or individual taste - is at stake
in a resoundingly Kantian way in recent art, which suggests that
Kantian imperatives change after Duchamp but remain relevant to
contemporary aesthetics and artistic practice. Put simply, de
Duve shows us the importance of understanding that "the readymade
is art only if you judge it as such" (381). Thus as his debts to
Kant show - though with a delicious irony, given the German
philosopher's lifelong attempts to make the aesthetic autonomous
- "The theory of art is not based on art. In other words, art is

not autonomous" (51).

Kant After Duchamp is a very personal book that reveals de Duve's admirably passionate views as well as his hobbyhorses. As someone who well remembers the late 1960s in Europe, he takes the long view in these revisited essays. He is not content with the status quo in the art world; neither is he nostalgic. He refuses to devolve his political and theoretical views into "critical theory." "As for myself", de Duve writes, "I believe that archaeology, in Michel Foucault's sense, is what the times are calling for, and that the archaeologist's approach, which should aim at a postmodern reading of modernity, is concerned with both acknowledging the 'theoretical service' rendered by Duchamp's reception in the sixties and putting [Joseph Beuys'] 'everyone-an-artist-utopia' into a broader perspective" (288). For de Duve, this perspective must always be historical, not ontological, which is perhaps where he most departs from Kant the transcendentalist. What does this archaeology uncover as it "...seeks to make sense of Kantian aesthetics, in light of subsequent art history" (317)?

It is fair to say that we learn more about Duchamp than Kant, though de Duve establishes their mutual relevance with flair. His readings of Kant are excellent, and his importance here is echoed in seriously clever chapter titles that echo Kant's Critiques ("Archaeology of Pure Modernism"; "Archaeology of Practical Modernism"), but the philosopher doesn't figure in the book until almost its halfway point. Nonetheless Kant's name remains a watermark on de Duve's pages. Even when his main interest is Duchamp's Fountain and its reception, or the "readymade" status of the blank canvas within the traditions of painting, de Duve remains more Kantian than he seems to realize. A thread running through the book can be described as an historically evolutionary argument about the development of the individual (and culture) from the personal position of critic to the historian and archaeologist. So Clement Greenberg assesses painting's vaunted flatness as a critic and historian (209). Here, de Duve argues that these two functions cannot adequately be separated. But earlier in the book, he describes an evolution from one aesthetic stance to another. In a revealing observation about Hegel, for example, we read that "it becomes possible to see that the Hegelian dialectic has maintained a systematic confusion of the positions of art lover, critic, historian, and aesthetician." De Duve expressly wants to "undo the confusion wrought by Hegel" (77). Here at least, he wants (relative) autonomy among discourses on art, just as Kant the paradigmatic disciplinarian did and just as Greenberg did as he promoted mid-century Modernism's notorious signature, the proscription of media "inerspecificity" (227), which Michael Fried famously deemed theatre.

That the book reveals productive tensions between de Duve's ideas now and when he first authored these essays is a strength. He is productively inconsistent on the topic of "postmodernism," which suffers reductive dismissal early in the book and a revitalization in the later chapters. As an "historian of tradition" (40), de Duve must state his judgments clearly and controversially. We are invited to disagree with assertions such as "Newman and the sublime are dead" (343), given the remarkable resurgence of interest in "transcendental" abstraction and the Sublime in contemporary art. De Duve is forgiven these slips, especially as his is the sort of work that yields memorable gems of insight. On Joseph Kosuth, for example, we read that "it is at the conceptual level that conceptual art gets it wrong" (414).^A _Kant After Duchamp_ is the product of deep and mature reflection. As such it is a credit to its author and a fitting memorial to those names that figure its title.

```
*************************************************************
```
< Exhibition Review: DISRUPTURE and CYBERHOME 2000 >
DISRUPTURE: POST MODERN MEDIA
San Francisco Museum of Art
May 22 - September 16, 1997
CYBERHOME 2000
Blasthaus
217 Second Street, San Francisco
April 23 - May 18, 1997
DISCOURSE between SR - Sonya Rapoport   BLW - Barbara Lee
Williams
E-mail: SR, rapop@socrates.berkeley.edu
BLW, delano@pacbell.net

SR: If Bob Riley in entitling his new exhibit, DISRUPTURE: POST
MODERN MEDIA, is suggesting an unsettling artists' perspective of
the 1980's, fortunately, the exhibition at Blasthaus gallery
settles us comfortably into a futuristic CYBERHOME 2000.

BLW: Yes, CYBERHOME incorporates art into a living environment
while SFMoMA presents an historic perspective on video art, but I
still think the significant differences between the two lie in
the different roles allotted to video.

SR: At Blasthaus the video is integrated into the door bell, into
the internet kitchen message panel, and is built into the
conferencing study and the high tech entertainment room. What a
blast!

BLW: Meanwhile, at SFMoMA, DISRUPTURE purports that the media,
especially television, distorts reality -- certainly true of
General Idea's CORNUCOPIA with its playful take on archaeology. I
think I liked this piece more than you. It presents its
'statement' up front so I'm not disappointed by its shallow
content, but rather amused by its twirling phallic ceramics.

SR: CORNUCOPIA's video narrative climaxed a cornucopia of mock
historic art that evolved into sexual content. I preferred its
installation, those pillars topped with revolving penises, an
archeological monument to sex - a gateway to the entertainment
world which is what the exhibit is all about.

BLW: DIGITAL MERCE by Nam June Paik is far more complex than that
- it literally and symbolically disrupts reality via media format
- remember how you had to dig for content in those tiny flashing
video screens? Is Bob Riley suggesting that media forces us to
work to find meaning? I like the fact that you can stand in
front of DIGITAL MERCE and, having never heard of Cunningham,
know that this piece is about dance, equilibrium, and movement,
transformed and reinterpreted by the video process.

SR: And created by a great video artist. However, I didn't strain
to look for content in its small monitors jam-packed with
information. I was impressed by the whole, the anthropomorphic
arrangement of 80's television sets in which the total content
was synchronized into a Merce Cunningham choreography, directive
arrows and stripes included.

BLW: Now, Dara Birnbaum's PM MAGAZINE comes closest to
reproducing the repetition of television ads, but her 'message'
is so understated, that the concept of disruption bestows a
potence upon this piece that it doesn't have. I think the message
is more about style replacing narrative content. Or do you
disagree?

SR: I agree, an aesthetic breakthrough conceptually and visually
- Birnbaum's PM MAGAZINE has style. This in a way mitigates its
title and source. "PM" was a popular left-wing newspaper.

BLW: What about Blasthaus? Why did you respond so immediately to
that environment and yet take such time with the SFMoMA pieces?
And why do you feel it is more optimistic than the SFMoMA piece,
besides the "Disruptive" title, I mean?

SR: I accepted the SFMoMA video exhibit as objects of good art.

Fini! I was ripe for something new and there was Blasthaus.
BLW: So, you are celebrating Blasthaus for looking forward and it
is seductive, but the way the technology is absorbed into this
environment deletes its identity as art which makes me uneasy.
Will we then take art for granted, as decoration, for example? Or
might we confuse entertainment with art? The screens in the
cyberhouse were actually showing television, not video artworks.
SR: That's why it was so exciting. The individual components were
industrial craft, but the whole - the furniture, the
architectural design, the high tech "absorption", the "art"
entertainment, were all integrated that made a work of art.
BLW: Then my question is: do the video works from the 80's still
have something to say -with or without the aid of the curator's
notes? Compared to CYBERHOME, are they relevant today?
SR: I think these video works have something to say as relevant
art objects from the 80's. Maybe a complete dissolution of art as
we know it is in the future.
===

< Classified Advertisements >
MIT Press Editor Douglas Sery to meet interested book authors at ISEA

Douglas Sery, Acquisitions Editor for The MIT Press, will be
attending the ISEA conference in Chicago Sept. 23-26 and will be
available to meet interested authors at the MIT Press/Leonardo
booth. MIT Press publishes the Leonardo Book Series, covering
topics in art/science/technology of interest to the Leonardo
professional community. MIT Press also publishes books of
interest in computer science, artificial life, architecture, and
design.
Authors interested in meeting with Douglas Sery during ISEA may
either come to the MIT-Press/Leonardo booth at ISEA or contact
him ahead of time to set up an appointment at dsery@mit.edu.
For further information on the Leonardo Book Series, including
instructions for book proposals, please see
http://mitpress.mit.edu/Leonardo.

Douglas Sery   (617) 253-5187
(tel)
Editor - Computer Science   (617) 258-6779 (fax)
The MIT Press   dsery@mit.edu
Five Cambridge Center   http://mitpress.mit.edu
Cambridge, MA 02142-1493
===
< Digital Review Notes >
Leonardo Digital Reviews is a review journal published regularly
as a section of the Leonardo Electronic Almanac. Leonardo Digital
Reviews covers publications, conferences, events and publicly
presented performances and exhibits. The focus is the work of
artists, scientists, technologists and scholars dealing with the
interaction of the arts, sciences and technology. Topics covered
include the work of visual artists, composers and multimedia
artists using new media and technologies in their work, artists
dealing with issues and concepts from contemporary science, the
cultural dimensions of science and technology and the work of
scholars and historians in related fields.
Specifically, we publish:
a) Reviews of publications in electronic formats (CD, CD-ROM,
CDI, on-line, diskette, WWW, etc.).
b) Reviews of print publications, events, conferences, and
exhibits dealing with art, science and technology.
Accepted reviews will be published in Leonardo Digital Reviews.
Reviews of key works will also be considered for publication in
the Leonardo Journal and Leonardo Music Journal published in
print by MIT Press. Authors, artists and others interested in

having their (physical) publications considered for review in
Leonardo Digital Reviews should mail a copy of the publication to
Leonardo, 425 Market Street, San Francisco CA 94107, USA. Event
and exhibit organizers, and authors of virtual/electronic
publications and events interested in having their event reviewed
should send information in advance electronically (only) to:
davinci@uclink.berkeley.edu
Individuals interested in being added to the Leonardo Digital
Reviews review panel should email (only) their curriculum vitae
to:
leo@mitpress.mit.edu
We are particularly seeking reviewers who can review material in
other languages than English. Unsolicited reviews are not
accepted by LDR.
==
< End Leonardo Digital Reviews JUNE 1997 >
==


```
 _____
|                         |
|   PUBLICATIONS          |
|_____|
```

< Musical Signal Processing
    edited by Curtis Roads, Pope, Piccialli and De Poli >
Editors: Curtis Roads, Stephen Pope, Aldo Piccialli(+), and
Giovanni De Poli
Edwin de Jong
Email: edejong@swets.nl
http://www.swets.nl/jnmr/snmr.html
Announcing a new book in the Studies of New Music Research
series.
Compiled by an international array of musical and technical
specialists, Musical Signal Processing opens the door to the most
important topics in musical signal processing today. Beginning
with basic concepts, and leading to advanced applications, it
covers such essential areas as sound synthesis (including
detailed studies of physical modelling and granular synthesis),
control signal synthesis, sound transformation (including
convolution), analysis/resynthesis (phase vocoder, wavelets,
analysis by chaotic functions), object-oriented and artificial
intelligence representations, musical interfaces, and the
integration of signal processing techniques in concert
performance.
Prepared over a period of four years, Musical Signal Processing
is designed to be adopted in courses of musical sound synthesis
and sound processing, in research centres, conservatories, and
university departments of music, acoustics, computer science, and
engineering. The audience includes electronic and computer
musicians, engineers, acousticians, and instrument designers. The
chapters in Musical Signal Processing have been written according
to a two-part structure: the first half tutorial, the second half
advanced. Thus any chapter should be accessible to students of
the field.
****
< Signal Processing, Speech and Music,
   by Stan Tempelaars >
ISBN: 90 265 1481 6
Edwin de Jong
Email: edejong@swets.nl
http://www.swets.nl/jnmr/snmr.html
Stan Tempelaars has been teaching signal processing for 30 years.
This book offers a comprehensive introduction to the theory of
signals and systems and the way in which this theory is applied
to the study of acoustic communication (both analog and digital):
the development of systems for producing, transmitting and

processing speech and music signals. The intention of the book is
to make the reader acquainted with the refined and powerful
theoretical and practical tools that are now available for this
purpose.
After having finished the book the student will understand such
Concepts as amplitude and phase spectrum, impulse and frequency
response, amplitude and frequency modulation, as well as such
methods for the analysis and synthesis of speech and musical
systems like LPC and wave shaping.
The use of complex numbers is avoided and a knowledge of
mathematics beyond high school is not necessary.
This book is designed for students of musical technology,
sonology, And phonetics. It can be used as a primary text for
courses dealing with acoustical and signal aspects of speech and
music. Each chapter has a problems and solutions section.
==

```
         _____
        |                   |
        |   ANNOUNCEMENTS   |
        |_____|
```
< Solar art exhibition in Finland >
Aurinko - Sun (Aurinko is Sun in Finnish) - exhibition of solar art
Rauma Art Museum 25.5.-29.6.1997
Further information:
Janne Koski
Rauma Art Museum
Kuninkaankatu 37
FIN 26100 Rauma Finland
tel: +358-(0)2-8224346
fax: +358-(0)2-8222183
janne.koski@korpi.pp.fi
The Aurinko - Sun exhibition in Rauma Art Museum in Rauma,
Finland, focuses on the sun and its light, its energy and life-
giving force, but also on the concept of energy of light in a
broader sense with artistic, ecologic, mythologic and technic
viewpoints to the sun. The exhibition is showing a great variety
of works that have solar energy or sun as an important element
and documentation of different projects dealing with sun or
solar power.
The exhibition is open during the sunniest part of the Finnish
summer until one week after the Midsummer Day, the ancient summer
solstice festival.
The exhibition was opened by the Minister of Education of Finland
Mr. Olli-Pekka Heinonen and the patron of the exhibition, who
also had a speech at the opening, is Mr. Madanjeet Singh,
Special Adviser to the Director General of UNESCO.
In communication, metaphysical questioning and needs of practical
life man has been obliged to find suitable tools to survive and
to cope with his environment. This exhibition is searching for
different kinds of solar technologies in mythology, technology
and art.
Mythological dimensions of the power of the sun are presented in
Helins Rautavaaraos manipulated documentary pictures of solar
symbolism in religious traditions of the world and in works of
present day artists finding their inspiration in ancient
mythologic art like Sinikka Palonen and Tamiko Thiel. From
technologic point of view sunshine can be used for utilitarian
purposes like in Jorma Ponkalaos solar boat presented as a
miniature model in the exhibition. The use of solar power in
architecture and public art is presented by plans and
documentation and science fiction visions, for example a floating
society of the future designed by architecture students in the
Helsinki University of Technology. The use of energy can take off
in strange directions unless there is discussion about the topic,

as Jacob Tue Larsen is showing in his work.
The astronomic curve in the environmental work by Antero Toikka
and oscillating paper spirals of Andromahi Kefalos are both
pictures of the heavenly coordinates of planetary orbits in our
solar system.   Sun and its light is the source of all life on
earth, but as we know, light is destroying organic matter and
therefore can also be dangerous for living beings. These
contradictory aspects of the Sun are studied in two works by the
Australian artist Allan Giddy.
The solar culture in all its diversity is represented in the
exhibition Aurinko - Sun by: The Audio Ballerinas (D), Jens
Brand (D), Bruno Erat (FIN), Jurgen Claus (D), Flash Light (USA),
Allan Giddy (AUS), Lisa Johnston (USA), Susan Kaprov (USA),
Andromahi Kefalos (Greece/USA), Taina Kuusikoski (FIN), Olli
Kuusisto (FIN), Jacob Tue Larsen (DK), Richard Lerman (USA),
Antti Maasalo (FIN), Maris Multimedia, Olsons (USA), Sinikka
Palonen (FIN), Joan Webster Price & Herbert Price (USA), Cynthia
Pannucci (USA), Jorma Ponkala (FIN), Helins Rautavaara (FIN),
Katariina Rautiala & Pentti Raiski & Jun Kojima (FIN), Leni
Schwendinger (USA), Tamiko Thiel (USA), Antero Toikka (FIN),
Karin Widahl (SE), James W. Williams (USA), Jim Gasperini &
Tennessee Rice Williams (USA), Jason White & Richard Wright
(GB).
The Exhibition is sponsored by Industrial Power Company, Neste,
Technology Development Centre of Finland Tekes, SONY Finland,
Nokia Display Products.
****
< 47th Biennale of Venice >
Presentation of Belgian artists at the Biennale of Venice 1997.
Organizers: Stiftung Starke, Berlin resp. Thomas Bush, the
Foundation Bevilacqua La Masa de Venise, resp. Chiara Bertola.
l'ASBL FLUX of Liege, resp. Lino Polegato, and the Teatro
Fondamente Nuovo of Venice, resp. Enrico Abate.
Club Media Belgium, *The CyberBull, BBB, Blanc Blue Belge,
Dr. Hugo & Charles Francois, new mediartists
Organization: asbl FLUX, resp. Lino Polegato,
Tel: + 32 4 25 324 65
Fax: + 32 4 252 85 16
Club Media/Online
http://netural-planet.de/biennale
"Under protection of the Biennale of Venice and the city of
Venice". Within the movement of different technical evolutions
concerning the new means of communication, we have decided to
create a "Media Meeting Point" during the Biennale 1997 in
Venice.
Place: Teatro Fondamente Nuovo (Giudecca) Fondazione Bevilacqua
La Masa
Cannaregio 5013, Venice.
Dates: from June 11 to the end of October.
Vernissage: from June 11 until June 15th, 1997.
Concept: a real-time Netcast visio-conference (Saturday, June
14th) will be held simultaneously in Venice- Kassel- Berlin- New
York and Brussels. The CyberBull will also be presented in QTVR
(QuickTime Virtual Reality) on the Net.
Event concept: the presence of a *real* bull BBB (genetic
sculpture) in the context 'off', at the Biennale of Venice.
Date: this special event will take place on Saturday 14th June at
16 pm.
Art Online:
Fuzzy Dreamz & Odd Jobs in the Cave
Dr. Hugo
    http://www.cybertheatre.net/dreamz
    http://www.nirvanet.net/dreamz
Charles Francois

http://web.arcadis.be/RAT/default.nclk
While the Ferarri symbolises a positive idea of Italy, the "BBB, Blanc Blue Belge" bull brings to mind a certain idea about Belgium: a label of quality and future. This animal which is effectively valued as a "mutant", is developed entirely in our country. He is totally 'produced' and imagined by man. Through it is not at all a direct product of genetic engineering, it is rather the ultimate step of a natural breeding process. Therefore it is in itself the outcome of a futuristic idea: all by himself, he symbolises the fusion between present, future and past. More than the virtual manipulations on the Internet, he is by his constitution, the true representation of a programmed manipulation at the service of man. As an exceptional genetic sculpture, partly real and partly virtual, strong and fragile at the same time, he is the ideal example of genetic mutation of future societies. In a deontological sense, today, this image implies the question: what is real in electronic and genetic manipulation? What is true and what is false? What is reality? What is identity? Is this "mutant" still a bull? Two artists-researchers have chosen to take a closer look at these questions by reflecting in public together on this phenomenon within the Online communications during the context 'off' at the Biennale of Venice. From the cave-paintings of Lascaux to the CyberBull, the potential symbolic power of the image of the bull is clearly in close connection with the origins of art-history and the history of mankind and is still used today. Dr. Hugo and Charles Francois continue this tradition...
The concept of the new mediartist:
The concern of these artists is no longer the "creation" of art (creating works of art, objects or a style and impose this style like a mirror of themselves and of the world) but to put communication at the centre of the debate. For them, the only tangible reality is no longer situated in the "created" work of art, but at the breast of the new communication technologies. The concept of avant-garde implies that new ground is being broken. But in our world, new knowledge is now increasingly more the immaterial territory of the Networks. "The Art = the URL" & "Art must be free". Paradoxically, the mediartist feels close to a past, where the artist was not yet individualised, where art itself was only a fuzzy hypothesis. The electronic Networks are recreating in us the multi-dimensional space orientation of the nomadic. It is clear that with the multiplication of real time communication resources on the Net (the collapse of the physical distances) we are witnesses of the birth of new structures, who have priority on the ego of the artist (the transcendence of the ego). The post-ego civilization is on its way...   Intervention concept: * The presence of a *real* bull "BBB, Blanc Blue Belge" (genetic sculpture) in the context 'off' at the Biennale of Venice.
****
< CNMAT Summer Workshop 1997 >
Application deadline extended: June 30, 1997
To apply, send letter of interest and resume to:
richard@cnmat.berkeley.edu
http://cnmat.CNMAT.Berkeley.EDU/SummerWorkshop1997/
An intensive two-week workshop covering prevalent and emerging methods of sound synthesis, tools for organization of timbral resources, real-time control strategies, and sound diffusion.
When: August 11-22, 1997
Where: Center for New Music and Audio Technologies (CNMAT) 1750 Arch Street, Berkeley, California
Cost: $1100 individuals and affiliates (a few partial scholarships may be available) $1400 corporate (non-affiliate).
Limited to 15 participants

Instructors:
David Wessel, CNMAT Director, UC Berkeley Professor of Music;
Adrian Freed, CNMAT Director of Research; Matt Wright, CNMAT
Musical Applications Programmer, UC Berkeley Lecturer of Computer
Science
Guest lecturers:
Edmund Campion, CNMAT Composer-in-residence, UC Berkeley
Assistant Professor of Music; Ron Smith, composer; Vijay Iyer,
recording and performing artist, UC Berkeley grad student
****
< Computer Music Conference-USA, The Roland Group >
Robert Baird, conference coordinator
Edirol Corporation
P.O. Box 4919
Blaine, WA 98231-4919
USA
+1(206)774-6707 or +1(888)233-4765
E-mail: segway@pacificrim.net
http://www.edirol.com
FOR IMMEDIATE RELEASE
Computer Music Conference Assembles Industry's Top Leaders And
Newest Technology Blaine, Wa.
Edirol Corporation, a division of The Roland Group, is hosting
the GS Developers Conference for North America, an unprecedented
event for developers and designers of music software, MIDI song
files, computer games and multimedia presentations.
On the West Coast, the conference will meet July 29 in Seattle.
East Coast attendees will meet Aug. 1 in Orlando.
The conference will bring together leaders in the field of
computer desktop music technology, and it will preview future
applications using GS, the emerging technology standard showcase
new software and new Roland GS hardware demonstrate how MIDI,
audio and video technologies can join together with GS discuss
GS/GM forward and backward compatibility review the implications
of the Roland/Microsoft licensing agreement for the future of
Desk Top Media Production, MIDI and the Internet; and illustrate
the importance of GS in shaping current trends in computer music.
"We're thrilled with this opportunity to share our experience
with the rest of our industry", said Laurie Gillespie, Edirol
president. "We are particularly excited about recent GS license
agreements with the giants of the computer industry. GS has
emerged as the format of choice, and its influence will soon be
ubiquitous."
Admission to the conference is free, but registration is
required; to register or for more information, call (888) 233-
4765.
****
< Six Exquisites International Sound Art Festival II (Tacoma) >
The Tacoma Art Museum
1123 Pacific Avenue
Tacoma, WA, 98402
Tel: 253/288-3018.
Festival information:
tel: 253/759-2556
fax 253/759-2623.
E-mail newsense@nwrain.com
http://www.nwrain.net/~newsense/NI.html
The Six Exquisites International Sound Arts Festival II will
bring to the Tacoma Art Museum an exquisite collection of world
renown sound artists for a four day celebration of new and
experimental work beginning with a workshop-presentation followed
by three evenings of individual presentations. The schedule will
be supplemented by community potlucks and gatherings and, at its
conclusion, will travel to 6X festival events in Spokane and

Seattle, Washington.

The featured artists are: Manos Tsangaris of Cologne; Pamela Z of San Francisco; Martien Groeneveld of Amsterdam; Pi-hsien Chen of Cologne; Brenda Hutchinson of San Francisco; Dorothy Martirano of Urbana, Illinois; and, Dan Senn, of Tacoma, Washington.

The festival's mission is to bring international sound artists to communities which otherwise would not have the opportunity; to place these artists within contexts uniquely accessible to the public; to showcase the magnificent Pacific Northwest to the artists; and, to create a close knit context from which the artists will easily collaborate in spontaneous group performances while instigating future relationships.

TACOMA ART MUSEUM FESTIVAL SCHEDULE (main events)
Wed, July 23, 5pm,   WORKSHOP, presentations by all artists.
Thur, July 24, 7pm,   PERFORMANCE by Pamela Z and Dan Senn.
Fri, July 25, 7pm,   PERFORMANCE by Brenda Hutchinson and Dorothy Martirano.
Sat, July 26, 7pm,   PERFORMANCE by Martien Groeneveld and Manos Tsangaris with Pi-hsien Chen

Admission to festival events is free with price of admission to the Museum. The festival is co-sponsored by Newsense Intermedium and the Tacoma Art Museum and is sponsored, in part, on a grant from the City of Tacoma Cultural Resource Division. More can be learned about the festival at the world wide web site.
===

```
 _____
|   ACKNOWLEDGMENTS  |
|_____|
```
LEA and Leonardo/ISAST gratefully acknowledges Interval Research Corporation for its continuing support of Leonardo Electronic Almanac.

_____

```
 _____
|       LEA        |
| WORLD WIDE WEB  |
|       AND        |
|       FTP        |
|     ACCESS       |
|_____|
```
The LEA Word Wide Web site contains the LEA archives, including all back issues, and the Leonardo Electronic Gallery. The Profiles and Feature Articles have been extracted from the back issues, and reside in their own sections of the site. It is accessible using the following URL:
        http://mitpress.mit.edu/e-journals/LEA/

_____

```
 _____
|       LEA        |
|  PUBLISHING &   |
|  SUBSCRIPTION   |
|  INFORMATION    |
|_____|
```
Editorial Address:
 Leonardo Electronic Almanac
 718 6th Street SE
 Minneapolis, MN 55414-1318
 Tel: (612) 362-9390
 Fax: (612) 362-0097
 Email: harri067@maroon.tc.umn.edu

_____

Leonardo Electronic Almanac is published by:
 The MIT Press Journals
 Five Cambridge Center
 Cambridge, MA 02142 USA

_____
< Ordering Information >
Leonardo Electronic Almanac is $15 to Leonardo/ISAST members and to subscribers to the journal Leonardo. The rate for Non-Leonardo subscribers is $30.00
Send orders to: journals-orders@mit.edu
Please include full mailing address or MIT Press account number, telephone and fax numbers, and e-mail address. Please send VISA/MasterCard information as well.

_____

 _____
 | ADVERTISING |
 |_____|
Individuals and institutions interested in advertising in Leonardo Electronic Almanac, either in the distributed text version or on the World Wide Web site should contact journals-info@mit.edu at MIT Press for details.
==
< End of Leonardo Electronic Almanac 5(6) >
==