INTRODUCTION

< Introduction by Roger Malina >

LEONARDO REVIEWS

< Cuts: Carl Andre Texts 1959-2004 > reviewed by Alise Piebalga

< Codex Mundi: Escritura Fractal II (con cuadratura numérica del hexagrama) > reviewed
by Ramon Dachs

< User: InfoTechnoDemo > reviewed by Martha Patricia Niño M.

< Über die Beziehung zur Welt (Relating to Reality) >
 reviewed by Frieder Nake

LEONARDO ABSTRACTS SERVICE (LABS)

< Top-rated abstracts from LABS English language database, 1st quarter 2006 >

LEONARDO

< Contents: Leonardo Vol. 39, No. 3 (2006) >

LEONARDO NETWORK NEWS

< Celebrating 40 Years of Leonardo >

< Leonardo Special Issue: Pacific Rim New Media Summit Companion >

< New Bibliography Published by Leonardo Education Forum >

< Organization Discounts Available >

< Website Launch for DOCAM >

< Our Faust has died: Nam June Paik Obituary by Jürgen Claus >

_____

INTRODUCTION

_____

Dear Leonardo Member,

Please find appended your next issue of the Leonardo Electronic Almanac, the electronic

supplement to Leonardo and Leonardo Music Journal and the membership e-zine for the members of Leonardo/ISAST.

The Leonardo network celebrates the 40th anniversary of its founding. Over the years we have documented the work of over 4000 artists, scientists, engineers and scholars and promoted art-science-technology interaction.

When we started there were almost no education programs in universities or elsewhere for those interested in the science/art collaboration or the use of new technologies in the arts. Today, there are numerous programs internationally.

We see ourselves more and more as a professional organization providing services to our members advocating issues and topics of interest to them. Faculty and students internationally are particularly active in our organization. Here are a few of the current services and publications:

Leonardo Education Forum

The Leonardo Education Forum, led by Amy Ione (Chair) and Eddie Shanken and Andrea Polli (Vice Chairs), organizes a number of activities of interest to faculty and students in the field. As a member you are welcome to join the Leonardo Education Forum.

<www.leonardo.info/isast/lef.html>

You will also find links to student blogs and projects. ##Pacific Rim Education Working Group

Ideas of how to meet the needs of educators around the Pacific Rim are also being discussed as part of the ISEA 2006 Pacific Rim New Media Summit. The Educators Working Group is led by Rob Van Kranenberg, Gustaf Iskander and Fatima Lasay who are working hard to converge on the summit at ISEA but also to initiate activities that will be long term. Leonardo is please to co-sponsor this activity

For more information: <01sj.org/content/view/143/91/>

Mediterranean Region Educational Issues

Leonardo also co-sponsors the YASMIN Mediterranean region art-science network:

<www.media.uoa.gr/yasmin>

Over the next two months the network will discuss educational issues around the Mediterranean region. We hope that you will join in the discussion, even if you have no close connection to the Mediterranean region!

Visit: <www.media.uoa.gr/yasmin/viewtopic.php?t=872>

Publications for Educators and Students

The Leonardo Book Series publishes a number of books that are used as teaching texts. These include "The Language of New Media" by Lev Manovich

A recent collection of texts edited by Paul Fishwick "Aesthetic Computing" is also of special interest.

For more about the Leonardo Book Series, visit: <www.lbs.mit.edu>

Our French Sister organization Leonardo/OLATS has also published a number of texts in French for use to educators. These include the on-line teaching module "Les Basiques: Art 'Multi-media' " by Annick Bureaud.

For more about this, visit: <www.olats.org/livresetudes/basiques/basiques.php>

We hope that Leonardo/ISAST will continue to be of use to educators and students and we

welcome your suggestions and comments on needs internationally.

In the future we will be providing more information about our activities and services in LEA, alternating with issues edited by LEA Editor-in-Chief Nisar Keshvani.

Roger Malina
Chair, Leonardo/ISAST

_____

LEONARDO REVIEWS#_____

This month Leonardo Reviews carries its normal volume of reviews of key texts (and some not so key) which may be valuable to our field. This month we also take advantage of the distribution of panellists and their particular language competences. Among the benefits is Nake's review of Über die Beziehung zur Welt (Relating to Reality) by Andrea Gaugusch. A strange choice to feature in Leonardo Electronic Almanac were it not for the very strangeness of the author and text to our Anglophone bias. Occasionally the advantages of the international provenance of our panel pays huge dividends by encouraging us to explore the territory of another language. Gaugusch is a witty and mischievous thinker and, as Nake suggests is worth the effort of translating.

Elsewhere Martha Patricia Niño M. confronts her linguistic 'other' in User: InfoTechnoDemo by Peter Lunefeld and Ramanon Dachs' Codex Mundi: Escritura Fractal II. Sharing Gaugusch's passion for word games and mixing in quantum physics is just too much for Niño it seems, while Lunenfeld seems so centred on a single culture that for a Colombian much is difficult to follow. Finally more prosaically and conventionally Cuts: Carl Andre Texts 1959-2004 is reviewed by our newest panellist from Latvia, Alise Piebalga. Dealing with it on its own terms she sees it as symptomatic of a condition of Modernism.

To read a complete list of the reviews visit: http://leonardoreviews.mit.edu

Michael Punt
Editor-in Chief
Leonardo Reviews

_____#
< Cuts: Carl Andre Texts 1959-2004 >

James Meyer, Ed.
The MIT Press, Cambridge, MA, 2005
352 pp., illus. Trade, $45.00
ISBN: 0-262-01215-4.

Reviewed by Alise Piebalga

Carl Andre is, arguably, one of the most discussed and re-interpreted artists of modern times. His Equivalent VIII, acquired by the Tate for £4000, is still a vital building-block in discussions on the role of art and public spending. Cuts, a compilation of interviews, texts, letters, and poems authored by Carl Andre and edited by James Meyer, offers a unique opportunity to gain a much more accurate, first-hand impression of the artist, his sculptural installations and poetry.

The book is divided alphabetically into subject headings, titles ranging from Art, Capitalism, Painting, and Poetry to Marcel Duchamp, Frank Stella, and artist's home town of Quincy. Each subject heading contains various types of texts: interviews, letters, poetry and short epigrams, and maxims. The nature of these texts, however, being private correspondences, published and unpublished letters and statements, means that the tone of the book is never assuming or ostentatious; instead, it evokes reflection and meditation forming an un-official conversation with the reader. The light-hearted tone is re-affirmed with the inclusion of short epigrams along with some witty letters to individuals and publishers.

The texts have been laid out with consideration: The more intellectually challenging ones, such as the correspondences between Carl Andre and his close friend and filmmaker Hollis Frampton, for example, 'On Sculpture and Consecutive Matters' and 'On a Journey to Philadelphia and Other Consecutive Matters,' the particular focus of the latter Marcel Duchamp and his Large Glass and Auguste Rodin's Gate of Hell, are interconnected with short and concise statements on the nature of art, particularly sculpture and literature. Notably evocative are the sections on Quincy, the artist's hometown, where Andre describes his first inspirations drawn from the dockyard and the quarry, and his reflections on life as an artist in New York and friendships with Hollis Frampton and the famous painter Frank Stella. Despite Andre's own distrust of photographs, all of the sections of this book are supported with images of his work, himself, and the surroundings discussed.

Andre's planar poetry, arrangements, and re-arrangements of letters and words in various patterns, weaves throughout the book. It is remarkable on how many levels these poems can be enjoyed; they have the aesthetics of a complex mathematical problem and the gravitational pull of a word game, as each letter gains its own autonomy and participates as an essential but independent particle within the pattern. The inclusion of these literary works and discussions on poetry not only illustrates the multidimensionality, commitment and thoroughness of Carl Andre's creative output but also helps to complete and round off the perception of the artist and his sculptural contributions to the world of art.

Cuts, texts by Carl Andre between 1959-2004, is more than just an account of one artist's artistic practice; it is an insight into an act of creation, from the first inspirations to late night discussions and tough interviews. It lays bare the fallacy of an artist as an inspired genius myth and exposes the intellectual and physical work, the need for persistence and in-depth knowledge about the works of others. This compilation of interviews, correspondences, reflections, and poems is an intimate introduction to the artist, his works, and the art world in general.

_____

< Codex Mundi: Escritura Fractal
 II (con cuadratura numérica del hexagrama) >

by Ramon Dachs
Garbarino Hnos, Buenos Aires Argentina- Nimes France, 2004
Not paginated. illus. Paper, $n/a
ISBN: 2-9517224-6- X.

Reviewed by Martha Patricia Niño M.
Pontificia Universidad Javeriana
Colombia

Ninom [at] javeriana [dot] edu [dot] co

Codex Mundi is a collection of six geometric texts written by the poet and librarian Ramon Dachs. The majority of the fractal figures are composed of one circle, the perimeter of which is formed by the text "the words assimilated to the dots. Their spatial simultaneous disposition (geometry) substitutes the linear temporality in which they usually occur (syntax) as a form of structure writing." He does not claim to be doing traditional poetry or even visual poetry, but, instead, he uses geometry to replace traditional phrase syntaxes in order to create more hypertextual structures.

Inside each circle, you can find one, two, four or twelve word(s) associated with a dot and a brief written commentary about each of the topics with the figure's reading key. The full list of works is composed by Twilight (unfolding from the shore) -Key : Symmetry; Story (unfolding of Biography) - Key: Segment; Generation (unfolding of contingency) -Key: 12 equilateral triangles in a six-pointed star; Reproduction (unfolding of body) -Key: Regular tetrahedron; Life (unfolding of abstraction) -Key: Centre of grav-

ity, and Maturity (unfolding of temporality) -Key: Orbital intersection. These writings were made at intervals between 1978 and 1993.

The terms, geometry and fractal, are switched during the text at some points. Dachs describes his geometric writing and fractal writing as analogous; in the prologue he says that geometric writing entails fractal writing. This is questionable; fractals cannot be defined by traditional Euclidean geometry. I would say the title of the book should be geometric writing since simple Euclidean forms such as circles, dots, and triangles compose most of the work. The cover of the book and has a figure with some structural resemblances to Mandelbrot's fractals in its perimeter. That is the most fractal aspect I could see at a formal level. Instead, his structures have strong formal association with the enigmatic figure of Ramon Lull and his medieval figures of the theory of knowledge. In particular, his Taula General and cabala diagrams, the hexagram, and some other references to the dark, grouped in the Geometric Writing No3 related with wound, skin, crack, rag, scar, rip, sew, and wall, being the most prominent part. The different sizes of the pages are coherent with the unveiling concept, but the binding of the book is rather fragile.

At a metaphoric level I guess it is successful, and the way to read the generative words and structures are definitely hypertextual as happens with the geometric writing No 3 (contingence). Thought provocative words mix geometry with hypertextuality. He claims to be doing the difficult task of proposing a genuine avant garde after their final eclipse. It also makes you obliquely consider how formerly separated realms such as science and magic ended up being so currently amalgamated thanks to the almost incomprehensible laws of quantum physics.

_____

< User: InfoTechnoDemo >

by Peter Lunenfeld; Mieke Gerritzen, Visuals
The MIT Press, Cambridge, MA, 2005
172 pp., illus. Paper, $25.95
ISBN: 0-262-62198-3.

Reviewed by Martha Patricia Niño M.
Pontificia Universidad Javeriana Colombia

Ninom [at] javeriana [dot] edu [dot] co

Peter Lunenfeld presents a collection of essays that were originally written for the User column at the international magazine Artext. Despite the nonacademic and playful style of writing that makes room for interesting iterative word games such as metro-retropsychometroretrophyscho, androgynovideoandrogino, infotechnodemoinfotechnodemo or narcosacrotheonarcoscarotheo. User deals with fascinating topics around culture, design, technology, and interdisciplinary issues in a time when "actors can be singers, singers strive to be artists, painters become film directors, digital artists say that they are scientists, scientists become entrepreneurs, entrepreneurs wake up one morning thinking they are politicians, and politicians, they have always been so protean (folksy at home, regal in the state house) that they are the poster children for the millennially ambitious" (p. 073).

The essays cover a far-reaching amount of topics, and they are very shrewd even if it is not a lengthy book: The chapter User Permanent Present talks about the preeminence of the instantaneous in which one cannot see anything beyond the current system, film or interface. Its relation with "amateur futurism" that is more concerned about creating more and more freakier aliens than opening the doors to interesting futures. Interfaces stop contributing by creating phobic users that are able to sacrifice metaphorical brilliance and elegance of interaction for the sake of comfort.

The Solitude Enhancement Machines is a chapter that analyses how technological developments are fostered and financed for big industries˜˜as sometimes happens with porn˜˜and valued for their revenues rather than for quality. The chapter, "Teotwawki," has some

rather comical first-person commentaries that deal with techno-apocalyptic imagination around the year 2000 that includes hysteria and faith vampires˜˜non-believers obsessed with belief˜˜that were hoping to find nourishing psychosomatic stigmata but found themselves starved and disappointed while contemplating the saviour on burrito wrappers instead. By that time, they were unable to foresee what was in store for them on 9/11.

The "Forever" chapter deals with the statements of the anti-death league including the proper maintenance rituals, the right combinations of vitamins and antioxidants in order to never get sick, eugenics, and descriptions of 135th birthday parties surrounded by the kids, grandkids, great-great grandkids and naturally your new lover. Chapters like "25/8" and "Master List" highlight the complete victory of democracy, the monarchy of speed. Guided by the principle of ultra efficiency in which the straightest path is the best and the human is constantly trying to push past the limits of flesh into the realm of pure performance.

Some chapters have plenty of local cultural references, "Urine Nation" is somewhat difficult to grasp for someone born out of Texas, I had problems seeing the utopist potential that could unify all languages and sign systems based on almost exclusively male transgressive practices. Other topics covered in the book are architecture, narratives, art, nanotechnology, videogames, globalization and the suspicion against the cosmopolitans, films, culture obsession with pop stars, biological and genetic metaphors in relation to the cybernetic and mechanical ones, and illusions of perceptions.

Having a good deal of self-criticism throughout the book, Lunenfeld mainly recognizes the potential dangers of toxic activities, like doing theory in real time, that he compares with holding mercury in the fingers, not only for the mercurial liquid-solid properties of the media itself but also for the relevant concern of being re-absorbed by the bigger solid-liquid puddle of media's banality. He also acknowledges the risk of interpretation, as when he recognizes the possibility of being considered an elitist, sexist, or even homophobe for emphatically disbelieving those who loudly profess their love for television, not as a guilty pleasure derived from a self referential sphere of personal consumption built around celebrities, but as something analogous to bibliomania or cinemania. It does not mean that bibliophilics are less driven by consumption when they collect books without reading them. User takes advantage of this fact, and it would find its way to their bookshelves because it is part of the Mediawork pamphlet series for The MIT Press where designers pair with well-known writers. Although he does not try to replace longer and deeper academic reflections, the resulting product is a "theoretical fetish object" designed to appeal. The idea is that form should not be separated from meaning, medium from message or seductive from rigorous, since design can use its visual intoxicating skills as an analytical translation tool. Mieke Gerritzen did a good job creating an impressive graphic design for every page of the book. The integration of graphic design with Lunenfeld's concepts is particularly remarkable in the sections "user permanent present", "solitude enhancement machines", "teotwawki", "25/8", and "growing up pulp".

Peter Lunenfeld is professor in the graduate Media Design Program at Art Center College of Design. He founded mediawork: The Southern California New Media Working Group and serves as director of the Institute for Technology & Aesthetics (ITA). His publications include Snap to Grid (MIT, 2000), and The Digital Dialectic (MIT, 1999). Recent publications include "The Myths of Interactive Cinema" for The New Media Book (BFI, 2002) and "The Design Cluster" for Design Research (MIT, 2004). Mieke Geritzen is founder and director of NL.Design, an Amsterdam based design company and head of the design department at The Sandberg Institute in Amsterdam. http://www.nldesign.net.

—————————————

< Über die Beziehung zur Welt (Relating to Reality) >

by Andrea Gaugusch
Carl-Auer-Systeme Verlag, Heidelberg, Germany 2002
90 pp., illus.
ISBN: 3-89670-315-3.

Reviewed by Frieder Nake

Bremen, Germany

Nake [at] informatik [dot] uni-bremen [dot] de

This is a very late review, and the short essay under review is in German. Only few readers will, therefore, ever read the review or even study the essay (which is part of a Ph.D. thesis). Those few should, however, make an effort to do just that. They will be rewarded, experiencing
 themselves diving into a nicely flowing language, poetic formulations at times, and pausing to ponder old questions again and in an enjoyable way. What is it that makes me consider myself a subject? How come I am different than those objects? What are the preconditions for the discourse on subjects vs. objects, and on grasping anything at all about something?

Andrea Gaugusch is a psychologist interested in language use by constructivists and psychologists. As a researcher and practitioner of language from Viennese origins, she knows her Wittgenstein and takes us on a language game journey to find places in time and space that could, perhaps, tell us a bit more about the origins of the observer and the observed, and what the observer would do observing his or her brain? Would she actually find such inside her skull, and would it be more than Turing's porridge? But if it did, would she be able to observe that, and in that case, would she further be able to tell us? In writing or speaking?

The reader is taken on a tour of deliberations that start from well-known theoretical constructs of epistemology, phenomenology, and semiotics. The introduction first tells you that the issue is certainty (Gewissheit) as in Wittgenstein's last written remarks, and second that the answer is "all things flow if we only let them flow".

The essay culminates in the sketch for a radio play about "OM"˜˜oral morals, a brief note on love. Two characters meet in that play, a writer and OM, who is not introduced other than through his name. Its sound reminds us of East Asian wisdom.

The seven sections between start and end of this printed version of flowing thoughts come under titles that could be translated as "Do pictures tell more than a thousand words?", "Language games", "Neuroscience defining the brain", "Perception as cognition", "Cognition as construction", "If a lion could talk", and "Understanding consciousness".

Even though it must be denounced as naive belief of first sight, it appears as a fact that subject and object are separate parts of the world. Of course, we realize, they are not fixed. But the separation is helpful for much of analytical thinking. In actual life we get along quite smoothly with the problematic dualism.

Contrary to this naive belief, recent constructivist theory offers empirical evidence that there is no consciousness guiding our decisions. A radical empiricist and materialist analysis tells us that, when we believe we make a decision, brain measurements actually show that what we call decision is nothing but a firing of neurons in reaction to stimulation from outside.

Gaugusch, always playing language games, however tells us that "consciousness"˜˜as a word and concept˜˜in certain such language games serves certain purposes, and isn't that a lot? Her essay seems to suggest that we should allow for amazement in our observation of reality. The reader will not be surprised to realize that some of her arguments are influenced by the Buddhist way of thinking.

Within about 75 pages, Gaugusch takes you to the places of the greatest riddles that humans in their minds' limited capacity can formulate. She also takes us to Eastern and Western answers. They are called love and game. On a theoretical level we might call them signs. Semiotics is not explicitly the hot topic of the book although it starts, on a semiotic consideration, into the revolutionary Wittgensteinean turn. Whereas the young Wittgenstein took things as givens onto which we stick name tags in order to be capable of talking about them, we don't do that anymore. For, when we investigate our brain, we need as a prerequisite the word "brain". Philosophy after the late Wittgenstein became something totally new. But this new attitude, the tremendous impact on our existence and knowledge of language as a sign system that we are using, has not been

widely accepted yet. Gaugusch wants us to become aware of this.

She also draws attention to the decisive difference between speaking and writing. We usually pull the two together as if they were but two forms of how language appears. Speaking, however, is much more a behaviour of our being-in-the-world than a detached naming and labelling of things in the world.

_____

LEONARDO ABSTRACTS SERVICE (LABS)

_____

Leonardo/the International Society for the Arts, Sciences and Technology is pleased to announce the top-rated abstracts published in the Leonardo Abstracts Service English language database during the 1st quarter of 2006.

Leonardo Abstracts Service (LABS), consisting of the English LABS database and Spanish LABS database, is a comprehensive collection of Ph.D., Masters and MFA thesis abstracts on topics in the emerging intersection between art, science and technology. Individuals receiving advanced degrees in the arts (visual, sound, performance, text), computer sciences, the sciences and/or technology that in some way investigate philosophical, historical or critical applications of science or technology to the arts are invited to submit abstracts of their theses for consideration.

Top-rated abstracts in both the English and Spanish language databases are chosen on a quarterly basis by peer-review panels under the guidance of Sheila Pinkel and Pau Alsina and published in the Leonardo Electronic Almanac.

The top-rated LABS authors of the 1st quarter of 2006 are: "Computer Graphics ˆ Aesthetic Experiments Between Two Cultures" by Christoph Kluetsch; "Transient communication systems: A system-theory reading of interactive digital installation art" by Falk Heinrich; "Virtual theatres" by Clarisse Bardiot; "The Delegation of Perception (DOP)" by Monika Jaeckel; "The Promise of Perfection: A Cultural Perspective on the Shaping of Computer Simulation and Games" by Jan Van Looy; "From Le Musee des Sciences to the Science Museum: fifteen years of evolving methodologies in the science/art interface?" by Martha Fleming; "KinAesthetic Movement Interaction - Designing for the Pleasure of Motion" by Jin Moen

More about Leonardo Abstracts Service can be found at: <www.leonardo.info/isast/journal/calls/labsprojectcall.html>

_____

< Computer Graphics ˆ Aesthetic Experiments Between Two Cultures >
by Christoph Kluetsch

ABSTRACT: During the 1960s, a new form of art emerged, which now is seen as a forerunner of digital media art. However, in this thesis it is argued, that early computer graphics stands in a much more complex context. To show this, five contextualizations and four pioneering work bodies are presented. ˆ First it is argued that computer graphics emerged in the context of C. P. Snow‚s Œtwo cultures‚. The cold war conflict and the abyss between the humanities and the natural sciences called for a Œnew breed of creators‚, bridging the two cultures by investigating and producing art based on scientific methods. Second, the philosophical and art theoretical background of the so-called Stuttgart school is introduced. Max Bense‚s and Abraham A. Moles‚s information aesthetics positioned approaches by Claude Shannon, Norbert Wiener, and David Birkhoff within a larger framework of semiotics, process ontology, and social sciences. Their goal was to determine objective numeric Œaesthetic measures‚ based on communication theory, perception theory, cyber-netics, and mathematics. Third, the purely descriptive approach of information aesthetics was transformed into generative aesthetic. The central manifesto was formulated by Max Bense in 1965, at the occasion of the first computer graphics exhibition worldwide in Stuttgart. Fourth, generative aesthetics and early computer art were both rooted in science and in the postwar art scene. The Bauhaus had

a revival at the Ulm ŒHochschule für Gestaltung, , as the New Bauhaus at Chicago spread its influence to new art and science centers at MIT and Harvard. Together with the New Tendencies movement in Europe, the international concept and op-art, as well as the Art and Technology movement in the USA, a framework was created that allowed art to be seen as Œvisual research, . Fifth, the concept of an objective (i.e. science based) art and aesthetics is linked to theories of art by Wölfflin and Panofsky as well as Kandinsky and constructivism. ˆ In the second part of the thesis, these contexts serve as a theoretical background for a detailed analysis of pioneering algorithmic art represented here by works of Georg Nees, Frieder Nake, A. Michael Noll, and Manfred Mohr. Interviews were conducted to connect documents of the time with retrospective insight.

< Transient communication systems: A system-theory reading of interactive digital installation art >
by Falk Heinrich

ABSTRACT: Falk Heinrich Transient communication systems: A system-theory reading of interactive digital installation art Introduction Since the arrival of computers in industrial and subsequently in private and social spheres, the digital machine has played a role in the production of art and its form. Installation art was one of the departments of art that embraced digital machinery and, since the beginning of the 1970s, digital technology has been involved in its formal features. In addition to the capacity of computers to include multiple media, it was especially the facility of digital registration of physical phenomena within defined parameters that lead to certain developments in installation art and the resultant term Œinteractive installation art, . These artworks depend on the physical actions of those Œviewing, the work. In this way, one of the characteristics of interactive installation art is achieved, which is the incorporation of the viewer into the work via the viewer, s Œin-stallation, into an art space (a space created by art). Besides the creation of an architectonic and semantic space,
 the elements of an interactive installation artwork are digital technology (which includes the sensor system measuring a participant, s actions within defined parameters), the computer programs that treat input data (data from the sensor) with regard to generating output in the form of visual, textual or audio phenomena, and lastly more-or-less precisely predefined action by the participants. The structure of the dissertation The dissertation is divided into two parts. In Part I, a theory of interactive digital installation art is developed. Part II comprises analysis of various interactive installation artworks. The analyses in Part II should be regarded as the method for the dissertation, s theory construction. In such manner, the analyses provide both a basis for my theory as well as exemplify that theory. At the same time, the analyses stand as reflections over individual works, in singularis, each with their own intentional specificity and spectrum of interpretation. Part I: theory Chapter 1, Methodological selections, introduces the disciplinary field in so far as I begin with shift in the conception of what constitutes Œa work, begun with installation art and intensified by interactive digital installation art. Interactive artefacts can no longer be regarded as being a definite expression, conceived and executed by an artist. It should rather be considered as variable work realisations, which in addition to spatial and digital expressions also incorporate participants, actions. This conception of an artwork vastly complicates the recipient position of the work, s viewer, in so far as the strategy of mental contemplation is confronted by the involved physical action; in which response to a work that depends on a distance between work and viewer no longer seems eligible. Any theory that wishes to be valid for interactive installation art, therefore, must be able to deal with a paradox that can be encapsulated in the question „how can a viewer be a contemplative observer of their own simultaneously performed action?‰ This paradox cannot be explained with a synthesised, identity-creating subject. The theory deployed here, however, proceeds from the system theory of Niklas Luhmann and is based especially on the distinction between psychic systems and communication systems, as well as on the distinction between autopoietic and allopoietic (the trivial machine) system types. My thesis is such: that interactive digital installations operate as staged, artificial interaction systems that I will call transient communication systems. These transient communication systems are generated on the one side conceptually by the artist and on the other side as work realisations of the implicated participant actions in interaction with the digital machine, s variously expressed outputs. Chapter 2, System operations, introduces a range of features from system theory that are relevant to my field of investigation. A short summary of Maturanas and Varelas, s concept of auto-

poiesis will be followed by a description of Luhmann‚s concepts of i) autopoietic systems as the operative observation of (Luhmannian) differences ii) his distinction between a psychic system and a communication system (social systems), together with the communication system‚s constitutive Œdifference‚ of information-utterance-understanding, and iii) the structural coupling and interpenetration between psychic systems and communication systems. As a result, investigation is carried out thereafter into allopoietic systems, via a résumé of the main dispositions and mechanisms of algorithmic, cybernetic systems. Chapter 3, Genealogical considerations, comprises an art-history influenced reading of installation art intended to distil the genealogical relevance of this artform for interactive digital installation art. Concepts brought into focus include space, conceptual art, and the recipient position of the viewer within various avant-garde traditions (futurism, Dadaism, Bauhaus, minimalism, and conceptual art). From a discussion that includes Michael Fried‚s rejection of minimalism and conceptual art, installation art is considered to be an interaction system in the process of becoming (called here an initial interaction system) that includes the viewer‚s observed observations in the space of the installation artwork. Lastly, the chapter focuses on arrival of digital multi-media technologies into the installation artwork‚s space and the subsequent shift from a primarily spatial response towards the artwork to a temporal one. Chapter 4, Transient communication systems, develops the dissertation‚s main thesis of digital interactive installation art as a transient communications system. The thesis proceeds from Luhmann‚s conception of the autopoietic interaction system (which likewise is a social system), which emerges from reciprocal observed observation, supported and ensured by the psychic system‚s perceptional generation of information (Wahrnehmung). In its demarcation to a autopoietic interaction system, interactive digital installation art is defined #a#s# #s#t#a#g#e#d#,# #a#l#l#o#p#o#i#e#t#i#c# #c#o#m#m#u#n#i#c#a#t#i#o#n#s# #s#y#s#t#e#m#,# #w#h#i#c#h# #s#e#q#u#e#n#t#i#a#l#l#y# #a#t#t#r#i#b#u#t#e#s# #e#x#p#e#r#i#e#n#c#e# #a#n#d# #a#c#t#i#o#n#,# ## a#l#t#e#r## #a#n#d# ## e#g#o## #t#o# #t#h#e# #p#a#r#t#i#c#i#p#a#n#t# #a#n#d# #t#h#e# #d#i#g#i#t#a#l# #m#a#c#h#i#n#e#.# #W#i#t#h# #a#s#s#i#s#t#a#n#c#e# #f#r#o#m# #H#a#n#s# #R#o#b#e#r#t# #J#a#u#"”## s# #r#e#-#w#o#r#k#i#n#g# #o#f# #t#h#e# #t#e#r#m#s# #a#i#s#t#h#e#s#i#s#,# #p#o#i#e#s#i#s#,# #c#a#t#h#a#r#s#i#s#,# as coupled, processual functions in the making and individual reception of art, and Wolfgang Iser‚s description of fiction as art‚s programme of transgression between the real and the imaginary, I work towards establishing the difference that constitutes transient communication systems: namely the difference of allopoietic and Œas-if autopoietic‚ systems. Because of this constitutive difference, the Œalter‚ of the person participating comes to be considered as both trivial machine and as autopoietic agent for the artist responsible for the work. The difference itself is communicated by each individual work as a Œfiction program‚. But, it is brought into effect as the difference present in the participant‚s consciousness (via coupling). This unity, a unity of the Œdifference‚ in observing, in itself necessitates second order observation, the implicit observer, who for the first makes decisions on what the artist‚s conceptual selection has been and, for the second, guarantees the participant‚s own aesthetic distance. As that which unifies difference, the second order observation, in particular, is responsible for producing subsequent communicative action, i.e. the subsequent communicative actions of the participant. This chapter concludes with an investigation into the body‚s function in the process of interpenetration between communication and consciousness. Drawing on Brian Massumi‚s concept of ŒAffect‚, interpenetration is defined as a communication system, and the psychic system‚s simultaneous observation of the body. Though based in the body‚s autopoiesis, the body is still ascribed an active role both in relation to consciousness and communication. Chapter 5, Perspectives, puts Part I into perspective as well as concludes it. Luhmannian interaction systems accomplish and at the same time distinguish itself from society, via three dimensions (temporal, thematic and social). Seen in this light, interactive digital installation art exists as being both dependent and dissident to the system of art. Being art, a fourth dimension to the transient communication system is brought out, which is the dimension of fiction. When the fiction program of interactive art occurs with the brute fact of the participant‚s body, the dimension of fiction stands out as art‚s description of itself, a description that reintroduces the issue of real-reality/imaginary-reality (i.e. the issue similarly addressed by diverse avant-garde strategies, but for alternative reasons and with other methods). By employing a comparative approach to the various artforms, the concept of interaction is crystallised as a point of convergence in the treatment of the difference Œreal-reality/imaginary-reality‚, centrally, in a society that to an increasing extent functions as serial reality constructions (e.g. with the aid of digital technol-

ogies). Part II: analyses The section covering analysis consists of eight analyses of varied scope, the common point to which is their diverse administrations of the difference allopoietic and Œas-if autopoietic, systems. The various weightings that the works exhibit, provide a continuum between poles. On the one hand, works are found that prioritise the Œas-if-autopoietic, mode. David Rokeby,s Very Nervous System (1986ˆ1990) and Charlotte Davies,s Osmose (1995) are relevant works to this mode. A characteristic of these works is their immersive qualities that try to diminish the distance between machine and participant by rendering the interface as Œinvisible, as possible. Ken Feingold,s Head (1999) and Sinking Feeling (2001), Max Dean and Raffaello D,Andrea,s The Table (1984ˆ2001) and, in part, Rokeby,s n-Cha(n)t (2001) work with a roughly even distribution between the allopoietic and the as-if-autopoietic mode of reception. These works build up a dialogic situation that positions the participant Œin front of, the computer in the role of agent. Lastly, to illustrate the allopoietic end of the continuum, I have chosen Lynn Hershman and Fabian Wagmister,s Time and Time Again (1999) and Knowbotic Research,s IO_dencies (1999). These two works deploy the digital machine in its structurally determined functionality. To conclude ˆ and as a borderline case ˆ I have chosen Jon McCormack,s Eden (2001), which works with a generative
 algorithm. The work,s reliance on AL-technologies makes problematic both my concept of interaction and the difference allopoietic and Œas-if autopoietic,. The continuum also reveals this artform,s differing realisations of processual space. The more as-if-autopoietic oriented works generally use a closed operative circuit between participant and cybernetic machine, which by-and-large plays itself out in a determined physical space. Works that accentuate the allopoietic dimension, however, burst the spatiality of an installation with an electronic permeability, in so far as they make use of data distribution available on the internet. This permeation renders art,s difference of real-reality/imaginary-reality problematic, since these works operate with computer technology as reality generating machines in/from the public sphere. In contrast, as-if-autopoietic oriented works focus on the fact of the body to provide a fulcrum for art,s difference. Nevertheless, all interactive works display a conceptual shift from an ontologically conceived concept of fiction to a concept of imaginary reality as the difference-establishing output of observation. The impetus here is not simply the fact that the digital machine synthesises and generates Œexpressions, which can no longer be considered representations of reality, but more so the second order observation of the participant that necessarily includes the participant,s own executed actions. The continuum also indicates a genealogical aspect. The as-if-autopoietic accentuated works generally date from an earlier period, whereas an allopoietic accent is found in later works. This can be interpreted as sign of a broad demystification of the digital machine since the 1980s, where faith in the autopoietic machine in the service of art still remained intact, to today where focus is placed on the importance of digital technology to network society, which to an increasing sense is based on the computer as a sign and a reality-generating machine. Via the questions designed to provide a perspective as to whether all forms for interactive art create transient communication systems, a closing discussion of convergences and divergences is taken up regarding interactivity as technological concept, and interaction as a social concept in relation to various interactive art and cultural phenomena.

< Virtual theatres >
by Clarisse Bardiot

ABSTRACT: As their main characteristic feature, virtual theatres proceed by using computer language. They now form a body of international pieces which, according to their authors, partake of theatre and include a number of productions designed either for the World Wide Web or for the stage, as well as immersive set-ups, installations, CD-ROMs, etc. Drawing on this corpus, the purpose of this dissertation is to examine how digital technologies and telecommunication networks affect theatre. Indeed, virtual theatres provide an incentive to rethink the basic components of modern occidental theatre ˜ space, actors and spectators, writing and directing for the stage. ŒMoiré, set designs, make it impossible to distinguish between the actor and the space, which is always made up of digital data and material elements. Arguably, the digital dimension is crucial towards a redefinition and a reappraisal of the actor,s and the spectator,s positions. Also, the presence of the body is a key aspect of virtual theatres, whether it be the body of the actor-as-Œsubjectile, (making interactivity tangible and breathing life into digital automata) or the body of the spectator-as-performer and the spectator-as-

onlooker (whose action and multimodal perception lead to a synaesthetic experience). That is why the concept of presence seems more relevant than the concept of interactivity, as exemplified by the different writing strategies used in virtual theatres (animated text, hypermedia writing, procedural writing∑). In each and every component of virtual theatres, two notions keep recurring, flux and the envelope, as they contribute to define a dramaturgy of the paramorph. Ultimately, what is at stake is no longer how to design a shape, but how to determine its variables, its components, and their relationships

< The Delegation of Perception (DOP) >
by Monika Jaeckel

ABSRACT: In this work space is more likely to be regarded as physical space in general merging into a digital data space, both considered as being simultaneously deeply involved in the changes of production and strategies of perception through information technologies. Theme and actuality: Urban space and public spheres definitely are undergoing obvious changes through information and communication technology. One aspect is the increasing amount of images produced and projected within these places, transmitted on the level of information. Physical space on one side has become extracted to data by surveillance systems, satellites, scanning systems, smart devices and so on, leading to a mapping, which forms an overlay of extracted data of former invisible space. Thus almost the same devices lead to an explosion-like growing of cyberspace, using any sources of signs. This background and the fact of the increasingly iconic status of images became the initial factor for this work, but as well the thought that a consciousness about the multiplying and changing status of images, and how the developments intermingle with strategies of perception, has to be developed. The analysis of the condition of images is arranged around the assumption about major influences technological implications must have on our perception of the so called real. The work has been written in 2002 and consequently focuses on complications, or better simplifications in deciphering, advanced through the impacts of 911 aftermath, with its simple, but widely accepted argumentation for the need of control in almost any area. This is considered as coming together with a backlash towards a traditional `black and white, orientation in image reading. Though the main focus of the research to look upon the construction of sight through remote devices, became intertwined with the constitution of reality through media strategies, thus simultaneously deeply involved in the construction of public spheres. In a logical consequence mainstream media and its technologies, as well as their strategies of constructing Œreal space, through virtuality are here considered as an essential aspect of the analysis. Concept and strategies: An increasing staging of performative scenarios in relation to images is changing the condition of space and as well the perception of both, the real, and the fictional strategies of production. This work is thus an attempt to achieve an analysis of the current state, and emerging strategies, with a closer focus on the effects, through the contraposition of some counter strategies using information technologies. Attempts considered were mainly selected for their aspect of performative methods to bridge the gap between real and virtual, image and space, without simplifying it into a pure mixture. The research idea to perceive space primarily as defined by a dimension of data overlay for the construction of the Œreal, and simultaneously as a real-time rendering through time, lead to the conclusion for a definite change in the perception of images and their related paradigms like space and time conditions. The concept of the project is dedicated to self-referentiality, non-visibility, as well as to non-linearity. In relation to these difficulties of perception in common context, the invoked structural and realization methods have defined its concept as an entire internet project.

< The Promise of Perfection: A Cultural Perspective on the Shaping of Computer Simulation and Games >
by Jan Van Looy

ABSTRACT: My dissertation deals with the question as to what extent a technological phenomenon such as the development of computer simulation and games can be described within a broader cultural frame. Traditionally, a radical distinction is made between socio-cultural and technological development, whereby the latter is often seen as an intruder trying to impose its laws upon human society from some vague outside. Since the 1980s, however, this so-called technologically deterministic perspective is be-

ing criticized by a predominantly European, constructivist school which emphasizes the socio-cultural shaping of technology by demonstrating that technological development is not an isolated phenomenon, but is shaped by the society by which it is pursued. My dissertation inscribes itself into this research tradition, whereby the central thesis is that computer simulation and games, both in their technological foundations and their content, form a reflexion of a number of cultural developments that have taken place in the second half of the twentieth century, most notably the growing emphasis on efficiency through competition and, concomitantly, on mathematical and quantitative analysis and description of reality. After a first, mainly methodological chapter in which the above is further explained, the dissertation follows a movement from form to function, from machine to man. The second chapter deals with the technological principles of mathematical modeling and the influence they have on the way in which physical and behavioral phenomena are represented. The third chapter explores the ontological status of modeled objects and phenomena, the so-called virtual, whereby the main thesis is that virtuality is a form of mimesis, of representation rather than a possible reality. The fourth chapter describes the role of the player, whereby it is noted that computer simulation and games distinguish themselves from other interactive forms such as hypertext literature and digital cinema by providing a fictional identity for the player who is, as it were, thrown
into the virtual world (introjection). The fifth and final chapter deals with the question of why man likes to play so much, why he seemingly without a purpose immerses himself in a fictional environment. The main argument laid out here is the so-called 'coping'-theory which claims that man uses fictional representations in order to negotiate his place in reality both practically and emotionally so as to come to terms with his fears and desires. Computer games are seen as a virtualization of the social pressure to be successful, a way of dealing with the fear of failure.

< From Le Musee des Sciences to the Science Museum: fifteen years of evolving methodologies in the science/art interface ? >
by Martha Fleming

ABSTRACT: From Le Musée des Sciences to the Science Museum: Martha Fleming 2004 Abstract The submission of published work of this practice-based doctoral thesis spans a period of 15 years from 1984 to 1999 and includes original artwork of international significance in visual documentary form as well as exhibition publications, museum interpretation materials, book chapters, and conference proceedings. In a variety of creative and critical ways, my work as an artist over this period has investigated and contributed to the evolving place of artistic and museological practices in uncovering deep-structure links between the arts and the sciences in terms of shared methodologies and epistemological inquiries. The synthesis focuses on methodology and practice in the production of my exhibition Atomism & Animism (Fleming, London, 1999) through the period of my artist residency from 1996 to 1999 at the Science Museum London. It begins by charting the acquisition of intellectual and practical skills during the making of Le Musee des Sciences (Fleming & Lapointe, Montreal, 1984) which is referenced extensively in Studiolo (Fleming, Johnstone and Lapointe 1997) and which was informed by readings of Feyerabend. The synthesis goes on to examine the evolution of my development as an artist uniquely exploring science/art links through museum exhibition practice and methodology, setting this evolution in an historically informed contextual framework. This framework has two broad aspects: the development of contemporary artists, practices in relation to non-art museums and museology in general, and the development of ideas of public understanding of science within a science museology milieu. I examine aspects of the flow between these contexts and my own work via the reference point of my lecture Paradigm & Diagram: How Artists Think Science (Fleming, 1996), which I wrote whilst producing Open Book (1996) for the Science Museum and the Dulwich Picture Gallery. The official residency at the Science Museum during which I produced Atomism & Animism (Fleming, London, 1999) followed on immediately, beginning October 1997. All three of these works are rooted in readings from Wittgenstein,s Remarks on Frazer,s Golden Bough. The conclusion outlines the unique bodies of cultural knowledge produced by the works which I submit, and proposes that their innovative exploration of subjectivity in the display of objects of science can in turn become a study arena for a scientific approach to consciousness. The synthesis finishes with an evaluation of the implications of my work for future interdisciplinary research between artists, scientists and cultural institutions.

< KinAesthetic Movement Interaction - Designing for the Pleasure of Motion >
by Jin Moen

This thesis aims at identifying and exploring properties and design aspects of human movement when used as interaction modality between people and technology. The work has been carried out with a multidisciplinary approach and combines theories, methods and practices from various areas such as modern dance, pedagogy, behavioural science, human computer interaction and research through design. The research question asked in this work is: Which communicative aspects and properties of human full-body movement are important when designing for movement-based interaction, and how could such design be accomplished? This question has been dealt with through carrying out an explorative study of people experiencing dance-based human movement. The informants used were participants on a dance course called Physical Expression. On the basis of this study the following aspects of human movement were identified and discussed: Movement imitation, Movement generation, Natural movements, The meaning of movement, Personal space, Self-confidence, and Movement literacy. These notions were further explored, in relation to movement-based interaction design, through the design and implementation of an interaction concept and a research prototype called BodyBug. BodyBug can be described as an artefact that initiates and maintains bodily movements through its need to be fed with movement input. It gives the users a possibility to create and explore three-dimensional movements within a personal interaction space, both individually and in groups. BodyBug is a small device but does not necessary create small-scale interaction and movements. The main findings from this research can be summarised in four theoretical notions that are related to human movement as a dynamic and communicative process: Movement Literacy, Personal Interaction Space, Imitate-React-Express and Social Acceptability. These notions reflect aspects of human movement such as the ability to verbalise, describe, sense and express intentions through human movement; the physical and emotional space we create when moving; the naturalness and understanding of movement; and finally, the social impact of movement. The design and implementation process of the interaction concept exemplifies how we can apply knowledge and physical experiences of human movement in concrete design for movement-based interaction. The design process of BodyBug is therefore described as a holistic design process. It also argues for the importance of, and need for, multidisciplinary competencies and contributions throughout the whole design process. This work has shown that making use of movement as interaction modality means to provide possibilities for getting to know one‚s own movement pattern and thus utilising the kinaesthetic sense and kinaesthetic awareness. However, since movement-based interaction is still in its early phase, we need more experiences and physical examples of this kind of interaction in order to develop an increased knowledge of human movement as design material. We also need to further investigate how movement-based interaction is experienced, and to continue the search for the essence and physical grounding of human movement in relation to technology and computational artefacts. Some of the biggest challenges are to design for movement-based interaction without loosing the aspects of individual preferences and differences in movement, and to preserve the spontaneity and ambiguity in human movement. As shown in this thesis, one approach to deal with these issues is to design for the pleasure of motion.

_____

LEONARDO, VOL. 39, No.3 (JUNE 2006)#TABLE OF CONTENTS AND SELECTED ABSTRACTS#_____

Editorial

< The Encyclopedia of New Media Arts > by Louise Poissant

Artists' Statements

< Cyberangels: An Aesthetic Peace Plan for the Middle East > by Mel Alexenberg

< Chasing Science Culture > by Chris Robinson

Artists' Notes

< Artwork Using 3D Computed Tomography: Extending Radiology into the Realm of Visual Art > by Kai-hung Fung

ABSTRACT: Using scientific data acquired from state-of-the-art multi-detector computed tomography (CT) scanners, the author employs 3D CT as a creative medium to demonstrate the beauty of human anatomy. Utilizing this new technology, the author hopes to achieve a new meeting of art and science, extending radiology into the realm of visual art.

< Toward a New Kind of Image: Photosynthegraphy > by Céline Guesdon

ABSTRACT: The author presents a new way of creating images that taps into new inter-rogations of images. The link between art and technology lies at the heart of her re-search. She uses a prototype camera that makes it possible to generate a 3D mesh start-ing from a single photograph. She presents various photographic creations begun during earlier studies in order to explain how her work leads to the perception of photography as volume-images.

General Note

< From Video Replay to the Relational Circuit to Threeing > by Paul Ryan

ABSTRACT: This article traces the invention of the relational circuit, which makes pos-sible an art of relationships called Threeing. This process of invention grew out of extensive video replay. Contrapposto made it possible to depict motion in stone. The relational circuit likewise makes possible a formal art of relationships for three people. This art form can be viewed in the light of relational aesthetics, a theory that judges artwork based on how it prompts inter-human activity and engagement with the world.

General Article

< ZENetic Computer: Exploring Japanese Culture > by Naoko Tosa and Seigow Matsuoka

ABSTRACT: The authors present ZENetic Computer as a means of cultural translation us-ing scientific methods to represent essential aspects of Japanese culture. Using images---deriving from Buddhism and other Asian concepts, sansui (landscape) paintings, poetry and kimonos---that have not heretofore been the focus of computing, the authors proj-ect the style of communication developed by Zen schools over hundreds of years into an exotic computing world that users can explore. Through encounters with Zen koans and haiku, the user is constantly and sharply forced to confirm his or her self-awareness for purposes of the story. However, there is no one right answer to be found anywhere.

Special
 Section: CAA 2005

< Perspectives on Collaborative Research and Education in Media Arts > by George Legrady

ABSTRACT: Digital arts is by nature a hybrid practice, integrating the poetics, aes-thetics and conceptual strategies of art with the logical, systematic methods of tech-nological processes from engineering and the sciences. This article reviews the devel-opment of interdisciplinary, collaborative arts-engineering research and education at the University of California at Santa Barbara, focusing on the Media Arts & Technology graduate program from a visual/spatial arts perspective.

< The Artist and the Scientific Research Environment > by Daniel J. Sandin, Tom DeFanti, Lou Kauffman and Yvonne Spielmann

ABSTRACT: The authors reflect on the experiences of collaboration between artists and sciences at the Electronic Visualization Laboratory at the University of Illinois at Chicago. They outline the measures that enable both media artists and computer sciences to benefit from the collaborations. In particular, if long-term collaborations are to be successful, the collaborators must garner rewards not only in the field of the collabo-

ration but also in their own respective academic or professional fields.

Special Section: ArtScience: The Essential Connection

< Albert Michelson, Painter of Light > by Robert Root-Bernstein

< The Helium Stockpile: A Collaboration in Mathematical Folding Sculpture > by Erik D. Demaine, Martin L. Demaine and A. Laurie Palmer

ABSTRACT: The Helium Stockpile is a manipulable folding structure of hundreds of wooden blocks, representing the transformation between surface and solid through a foldable one-dimensional chain. The sculpture grew out of an unexpected collaboration between a sculptor and two mathematicians, giving the structure a mathematical basis through which it is guaranteed to be foldable into essentially any three-dimensional shape.

< Extended Memory: Early Calculating Engines and Historical Computer Simulations > by David Mather

ABSTRACT: When framed within cognitive theory's extended mind hypothesis, Charles Babbage's 19th-century calculating machines illustrate a distinction between accuracy and flexibility. These properties affect how historical data and memory are organized, providing conceptual linkages for mind-machine integration. The distinction between accuracy and flexibility is also apparent in present-day computer simulations that use historical scenarios, such as virtual-reality software designed for the Bloody Sunday Inquiry, history-based video games and other art and entertainment software applications. These contemporary examples share one important feature of extended mind: the incorporation of history or personal memory into a shared memory system.

< Reduction of Physiological Stress Using Fractal Art and Architecture > by R.P. Taylor

ABSTRACT: The author reviews visual perception studies showing that fractal patterns possess an aesthetic quality based on their visual complexity. Specifically, people display an aesthetic preference for patterns with mid-range fractal dimensions, irrespective of the method used to generate them. The author builds upon these studies by presenting preliminary research indicating that mid-range fractals also affect the observer's physiological condition. The potential for incorporating these fractals into art and architecture as a novel approach to reducing stress is also discussed.

< Rembrandt's Portraits: Approach of Avoid? > by James A. Schirillo and Melissa A. Fox

ABSTRACT: In 74% of Rembrandt's female portraits, the subject's left cheek faces the viewer. However, this occurs in only 26% of his male portraits. This asymmetry is consistent with viewers' assessment of Rembrandt's left-cheeked male portraits as preferably avoided, which may indicate that aggressive dominance is governed by the contralateral right hemisphere of the brain, while the rating of left-cheeked female faces as preferably approached may indicate sexual attractiveness. Rembrandt's exposed-cheek gender difference suggests that both sexual selection and dominance are governed by the more emotionally oriented right cerebral hemisphere.

Leonardo Reviews

Reviews by Roy Behrens, Martha Blassnigg, Andrea Dahlberg, Anthony Enns, Allan Graubard, Dene Grigar, Rob Harle, Amy Ione, John Knight, Michael R. Mosher, Robert Pepperell, Kathleen Quillian, Aparna Sharma, George Shortess, Eugene Thacker, Pia Tikka, Stefaan Van Ryssen, Claudia Westermann

_____

LEONARDO NETWORK NEWS#_____

< Celebrating 40 Years of Leonardo >

The Leonardo network was first started in 1966 in Paris. The first issue of the journal Leonardo was published in 1968. Leonardo/ISAST is launching its 40th anniversary celebration with a number of activities. Leonardo/ISAST is planning many large-scale events and activities to take place over the next few years. Information about Leonardo 40th anniversary projects and events will be listed in a special section here in Leonardo Network News, as well as on the Leonardo web site at <www.leonardo.info/isast/events/leo40.html>.

Leonardo and LMJ Archives Now on JSTOR

Forty years ago Roy Ascott was working on his text "The Cybernetic Stance," David Bohm was writing "On Creativity," L. Alcopley was preparing his interview with Edgard Varèse and C.H. Waddington was writing "New Visions of the World." These texts, along with those written by Richard Land, Frank Malina and others established the first volume of the Leonardo library.

We are happy to announce that these articles, along with thousands of other Leonardo and Leonardo Music Journal texts by artists and researchers around the world working at the intersection of the arts, sciences and technology, are now available through the JSTOR Arts & Sciences III Collection. Current Leonardo and Leonardo Music Journal subscribers can now search, browse, view and print full-text PDF versions of the JSTOR collection for an additional $25 annual access fee. Contact MIT Press at journals-orders [at} mit [dot] edu to set up your access today. The JSTOR Arts and Sciences III Collection is also available to users at participating institutions. To find out if the university or other institution you are affiliated with has access to Leonardo and Leonardo Music Journal through JSTOR visit: <www.jstor.org>.

Leonardo Celebrates Leonardo da Vinci
Special Section of Leonardo, 2007--2008

In celebration of the Leonardo journal's 40th anniversary, we are calling for essays related to Leonardo da Vinci and his concerns regarding the relationship between art and science. We are interested in submissions in which Leonardo's own concerns serve as a springboard for looking towards the present. What, building upon Leonardo's ways of thinking, can artists and scientists tell each other today? We also seek original accounts of his visual art, of his achievements as a proto-scientist and of the relation between his concerns with science and with visual art.

Recommended length: 2,500--3,500 words
Illustrations per essay: 5--8 black-and-white images; possibly one color image.

Prospective authors are encouraged to review the Leonardo Author Guidelines on the Web: <www.leonardo.info/isast/journal/editorial/edguides.html>

All papers will be peer reviewed prior to acceptance for publication.

Please send inquiries and submissions to Guest Editor David Carrier, Department of Art History and Art, Case Western Reserve University, Cleveland, OH 44106, U.S.A. E-mail: dxc89 [at] po [dot] cwru [dot] edu.

_____

<Leonardo Special Issue: Pacific Rim New Media Summit Companion - Leonardo Volume 39, No. 4 (August 2006)>

Leonardo is pleased to be a co-sponsor of the Pacific Rim New Media Summit (PRNMS), a pre-conference event to ISEA2006. In conjunction with PRNMS, Leonardo will release a special issue of the Leonardo journal to serve as a summit companion. Guest-edited by artist and educator Greg Niemeyer, this special issue of Leonardo follows the Working

Group structure of the summit itself, featuring introductory texts by the Working Group chairs and preliminary papers of Working Group members.

This special issue of Leonardo will be included in the registration packs of all ISEA2006 early-bird conference registrants (until June 15, 2006), with additional copies available for sale at ISEA2006. Visit <01sj.org> to register.

Highlights of Leonardo 39:4 include:

Surfing the outernet: Where net art presented the medium of the Internet, locative art brings to the fore the media of mobile and wireless systems. Drew Hemment unfolds a taxonomy of locative-art approaches to the gap between the perfect grid and the reality of the mapped world.

Cyber-mythologies and portraits of dispossession: Rachel O'Reilly examines how Asian and Pacific understandings of place in recent work by Vernon Ah Kee, Lisa Reihana and Qiu Zhijie expand the frames of contemporary locative art.

Cartographies of the future: Annie Lambla discusses the San Francisco Exploratorium's Invisible Dynamics project, which considers the museum's relocation from a perspective integrating art, science and geographic context.

Culture, uncontained: Commerce, communication and technology intertwine in the works of the Pacific Rim New Media Summit exhibition Container Culture. Artists from Mumbai to Vancouver use the medium and metaphor of shipping containers to explore regional and global complexities.

< New Bibliography Published by Leonardo Education Forum >

The Leonardo Education Forum (LEF) has published a new bibliography for the Leonardo Bibliography Project. The LEF bibliography includes seminal books, periodicals and academic programs available for students and professionals
 working at the intersection of art, science and technology. The bibliography is available at: <www.leonardo.info/spec.projects/lefbiblio.html>

The Leonardo Education Forum (LEF) promotes the advancement of artistic research and academic scholarship at the intersections of art, science, and technology. Serving practitioners, scholars, and students who are members of the Leonardo community, LEF provides a forum for collaboration and exchange with other scholarly communities, including the College Art Association of America (CAA), of which it is an affiliate society.

The Leonardo Education Forum is open to all individuals who are members of Leonardo. For more information about the Leonardo Education Forum, a list of members and how to join, please visit: <www.leonardo.info/isast/lef.html>

< Organization Discounts Available >

Special discounts on Leonardo publications are currently offered to organizations interested in networking with the Leonardo/ISAST community.

Members of the following organizations are encouraged to follow up on the opportunity to receive special discounts on new subscriptions to Leonardo and Leonardo Music Journal by contacting your organization's Members Services: ISEA, The Guggenheim, College Art Association, The San Francisco Museum of Modern Art, The Walker Art Museum and The Miami Art Museum.

Organizations interested in setting up a special Leonardo discount for their members should contact MIT Press Journals Marketing Manager Laura Esterley: lesterly@mit.edu

_____

< Website Launch for DOCAM (Documentation and Conservation of Media Arts Heritage) >

As a member of the DOCAM research alliance, Leonardo is pleased to bring your attention to the opening of the new web site:

The DOCAM research alliance announces the launch of its new web site. Initiated by the Daniel Langlois Foundation for Art, Science and Technology, DOCAM's primary objective is to develop new methodologies and tools to address the problems of preserving and documenting technological and electronic works of art.

The DOCAM web site allows visitors to explore the research alliance's key areas of focus:

- The conservation of works of art featuring technological components
- Documentation strategies and structures adapted to these works of art
- A typology and historical listing of the technologies deployed by the artists
- Catalogue structures and methods for works featuring technological components
- Terminological tools and structures for the electronic arts

The DOCAM web site also offers a list of related research committees and their members, information on DOCAM events, and electronic and media art conservation and documentation resource directories. Research reports and articles on case studies conducted by DOCAM will also be added regularly to the site. And finally, a thematic scan of the key research areas targeted by DOCAM is accessible from the site: <www.docam.ca>.

_____

< Our Faust has died: Nam June Paik Obituary by Jürgen Claus >

Nam June Paik (July 20, 1932 - January 29, 2006)

What an ingenious idea to make you, a global travelling video guru, a professor at the Düsseldorf Academy of Fine Arts in 1979. Your respectable guidelines for those students who were searching for private assistance was: "Best teacher not visible!" Actually your language: You studied philosophy and art history in Tokyo beginning in 1953. In 1957 we were both together in the Munich University seminar "History and Theory of 20th Century Art." You had been familiar with theories as well as many art historians, but you chose to use philosophic quotations as collage in an overall personal reference system. "On my recent trip to Tokyo," you said in 1976, "I bought dozens of books about time by Oriental and Occidental thinkers. On my return to New York, I found out that I have no time to read them" [1]. Your language was imprinted by Asian logograms, German thoroughness, fiddle-faddle and American pragmatism. To understand you, one had to have a "Paik-input" in one's own apparatus of communication.

When we met 10 years later in the New York apartment of Pop Art Mover Lil Picard you had combined excessive Japanese TV avantgarde-knowhow with individual technique-non-conformity and a very personal media-poetry. Charlotte Moorman had become your fixed star--the second, after your life companion Shigeko Kubota. In a (possible?) (forthcoming?) "Clash of Civilizations" we miss people such as you, Paik, who are simultaneously on thirteen Channels, entitled Education, Medicine, Transportation, etc--like your "Faust"-Stations (1989-91), simply called by you "My Faust."

In February 1988 we had been asked to join the founding mother of the Cologne Media Arts Academy (Anke Brunn) in Düsseldorf to discuss the academic curriculum of Media Arts. Whereas I opened discussion about my ideas of an "Electronic Bauhaus" [2] you saw no gap between the fine and the applied arts: "Anyhow art is art history written every year again and again." In 1990 you thought it was time for you "to practice a bit of dying" and to look for a "propitious site for a grave." "However," you said, "I've no money for that and land prices became so steep, let's live on and die by an ersatz"[3]. Later you said you would fade away at 75. It was the "right age to go." Now it has happened to you sooner. In your Zen-Buddha-Dada-Flux-Heaven you may ask for a return to earth (the globe), and we will be glad!

Jürgen Claus,
Leonardo International Co-Editor

1. Nam June Paik, "Input-Time and Output-Time," in Ira Schneider, Beryl Korot (Ed.),
Video Art. An Anthology (New York: Harcourt Brace Jovanovich, 1976, p. 98).
2. Cf. Jürgen Claus, "The Electronic Bauhaus" in Leonardo, Electronic Art Supplement
Issue, pp. 13-18, 1988.
3. In Catalogue Beuys Vox 1961-86, Won Gallery / Hyundai Gallery, Seoul 1990.

LEONARDO NETWORK NEWS COORDINATOR: Kathleen Quillian#kq [at] leonardo [dot] info

_____

* ~ * ~ * ~ * ~ * ~ * ~ * CREDITS * ~ * ~ * ~ * ~ * ~ * ~ *

_____

_____

* ~ * ~ * ~ * ~ * LEA PUBLISHING INFORMATION * ~ * ~ * ~ * ~ * ~ *

_____

_____

_____

< Ordering Information >

Leonardo Electronic Almanac is a free supplement to subscribers of Leonardo and Leon-
ardo Music Journal.

To subscribe to Leonardo, visit: http://www.mitpressjournals.org/loi/leon

To subscribe to Leonardo Music Journal, visit: http://www.mitpressjournals.org/loi/LMJ

For Leonardo and LMJ subscription queries contact:
journals-orders [at] mit [dot] edu

_____

* ~ * ~ * ~ * ~ * ~ * ADVERTISING * ~ * ~ * ~ * ~ * ~ *
_____

Leonardo Electronic Almanac is published monthly -- individuals and institutions in-
terested in advertising in LEA, either in the distributed text version or on the World
Wide Web site should contact:

Leonardo - Advertising
800 Chestnut Street
San Francisco, CA 94133

phone: (415) 391-1110
fax: (415) 391-2385
E-mail: kq [at] leonardo [dot] info
More Info: http://leonardo.info/isast/placeads.html#LEAads

_____

* ~ * ~ * ~ * ~ * ~ * ACKNOWLEDGEMENTS * ~ * ~ * ~ * ~ * ~ *
_____

_____

< End of Leonardo Electronic Almanac 14:2 >