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EDITORIAL

by Nisar Keshvani
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How often have you felt like you're in a dense forest with beautiful trees? Trying to both admire the greenery \*and\* navigate your way through? Between the sounds, smells, and other distractions like creeks, wild weeds, it's easy to get lost.

It's pretty regular for me. I'm amazed daily by the amount of 'data mining', that goes on at Leonardo, especially with the lightning speed development in art, science and technology across the world. Some of which is evidence that truly creative geniuses are a reality.

The latest Leonardo Educator's Initiative literally came out from the woods. In January, Roger Malina and myself were walking the "Muir Woods", an ancient coast redwood forest in North San Francisco. Mixing a little sightseeing with work talk.

While exploring how we could build an international community in academia, we hatched this initiative. Students and faculty can now receive a free subscription to the Leonardo Electronic Almanac e-mail digest at: http://mitpress.mit.edu/lea/e-mail

We've introduced the Leonardo Faculty mailing list to encourage discussion and exchange of ideas (to join email lea@mitpress.mit.edu with a brief introduction). And we wanted to encourage students to refer to LEA as a resource, introduce them to new ideas, developments and pioneers in the field while giving them an opportunity to contribute to the existing body of knowledge.

Seven months down the track, we launch the Leonardo Abstracts Service with information on Adriana A. de Souza e Silva's thesis, "Design as Interface of Contemporary Design". It includes thesis title, abstract, access and author contact information so that readers can contact her to discuss ideas. This will become a regular part of LEA (email lea@mitpress.mit.edu on how to submit). We encourage you to contact us with any comments, thoughts, ideas or feedback on this initiative.

Our feature this month by Sundar Sarukkai, an National Institute of Advanced Studies (India) Fellow explores the metaphor of 'Praying to Machines'. He discusses the emphasis of prayer and religion in the Indian culture, and weaves an interesting insight into the culture of technology. Perhaps this will whet your appetite without revealing too much:

"... the nature of the rituals is so similar to that offered to gods that this raises a perplexing question as to whether technological products are seen to be "god-like" or as surrogates of God."

Highlights in Leonardo Digital Reviews are Stefaan van Ryssen's

review of Roy Ascott's 'Telematic Embrace: Visionary Theories of Art, Technology and Consciousness' while Amy Ione looks at \*Photography's Other Histories\* edited by Christopher Pinney and Nicolas Peterson.

\*BitArt,\* a webwork by Robert J. Krawczyk is discussed by Luisa Paraguai Donatia and Mike Mosher examines Takahiro Iimura's DVD \*Seeing/Hearing/Speaking\*. Elaine W. Ng provides an insight to the 50th Venice Biennale. Plenty more where these came from at: http://mitpress.mit.edu/e-journals/Leonardo/ldr.html

| Enjoy! |   |          |   |
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### PRAYING TO MACHINES

Sundar Sarukkai, History and Philosophy of Science Unit, National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore 560012, India

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The Indian Institute of Science is one of the premier research and teaching institutes in India. It occupies a substantial area, on land originally donated by the Maharaja of Mysore. Along the northern boundary of the Institute, there is a complex of colleges, which offers degrees in engineering, medicine, dentistry, catering and management. In between the many departments, construction on a temple is underway. In the southern part of the Institute's campus, adjoining one of its gates, is another big temple. A gate on the west opens out to a church.

However, there is no temple or any other place of worship inside the Institute's campus, even near the residential quarters. Given the tendency of the Indian public to create gods and shrines instantly out of stones, trees and anthills, it is indeed remarkable that the residents (both scientific and administrative) have not generated even one permanent place of worship inside the Institute. If they have to go to a place of worship, they have to go outside its many gates. That there is no place of worship inside the campus is a reflection of the insistence on keeping science and religion apart, especially in premier scientific institutions in India. What is surprising is that in a society that is forever inventing and reinventing religious symbols, the Institute continues, without any obvious discomfort, on its non-religious path.

The temple adjoining the southern gate used to be a small shrine. Over the last few years, it has become very popular, as manifested in the growth of the shrine into a large, colorful temple. There is a circle, usually called the "Maramma Circle," in front of the gate and temple. The goddess in the temple, in a

parody of self-reference, is commonly referred to as "Circle Maramma." However, there is an official name for the circle. Tucked away in a corner, with overgrown shrubs covering it, is a name-stand on which the name of the circle can be read, although the paint is fast fading: "Sir C. V. Raman Circle," named after the Nobel Prize winner. In the public consciousness, then, the circle "belongs" more to the goddess than to the scientist.

The goddess is said to be powerful and this temple has become well-known as a place for the ritual of offering worship to vehicles. Large numbers of people and vehicles gather in front of the temple, especially on Tuesdays and Fridays. The crowd of vehicles outside the temple makes it difficult for those who enter the Institute through the adjoining gate, symbolically reflecting the strained state of the relationship between science and religion in India.

A typical scene in front of the temple is as follows. Vehicles of all kinds are washed (bathed?) before they are brought to the temple and the front of the vehicle may be adorned with flowers. A priest from the temple goes to each of the vehicles with a plate in hand. The owners of the vehicles place fruits (mostly bananas), coconut, flowers, lemon, camphor and other sundry items in front of the vehicle. The priest then offers a flame to the vehicle in the manner in which it is offered to religious idols. A coconut may be broken in front of the vehicle or a lemon may be put under each of the wheels of the vehicle. When the crowd clears, crushed lemons are strewn along the road.

Why would people offer puja to vehicles (I will use the word puja to stand for a set of rituals in offering prayers and worship)? To understand this, we have to note the range of activities where similar forms of worship are seen. In Indian classical dance, dancers offer a prayer to the Earth, asking for forgiveness for dancing on it. Prayers to rivers are very common across the country. For example, in Haridwar, the daily evening prayers to the river Ganges, which include the ritual of setting afloat tiny "boats" with flowers and a flame, are a sight to behold. For certain functions, orthodox cooks offer a puja to their stoves before they start cooking.

This ritual of offering puja to various "things" is culturally enshrined in an important festival called Ayudha Puja. Originally, it was meant to be a ritual of worship towards various "weapons" and "instruments." The puja, which consists of anointing these items with sandalwood and other pastes and adorning them with flowers, includes other practices such as breaking coconuts and offering the camphor flame. This puja, as practiced today, is offered to almost any piece of machinery, including washing machines, televisions, kitchen grinders, vehicles, machines in factories, computers and so on. The day of this festival is a holiday for many institutions, including factories and scientific laboratories, since it is the day for the machines to be "worshipped." This puja used to be performed only on a particular day in a year, whereas it is now conducted throughout the year, although its practice through the year is restricted only to vehicles.

It may seem as if every object, be it natural or technological, is taken up for worship in this manner and that offering puja to machines thus has nothing to do with technology per se. But this conclusion would be a bit hasty. There is indeed something being said about technology in the public consciousness when prayers are offered to it. First of all, the nature of offering worship

to machines is quite different from offering worship to other objects. Second, this practice has become so predominant that prominent temples, such as the Chamundeshwari Temple in Mysore, have separate pujas for scooters, autos, buses and so on! Also, the nature of the rituals is so similar to that offered to gods that this raises a perplexing question as to whether technological products are seen to be "god-like" or as surrogates of God.

I want to argue that this form of worship is indeed particular to technology. For example, when puja is offered by the dancers to the Earth or by devotees to the Ganges, there is the assumption that one is offering prayers or worship to the goddess Earth or to Ganga. Offering prayers to these entities is equivalent to offering prayers to the gods associated with them. But in the case of technological products, there is seemingly no special god for technology (although there may be some demigods, like various village deities associated with activities that have to do with local manufacturing, artisanship and so on). Interestingly, the deity of the temples in which this puja is offered is most often the goddess Devi, Amman and her other various forms, implying a gender, caste and class twist to this whole process!

Furthermore, there are various meanings to offering such forms of worship, as can be illustrated in the example of offering such a puja to humans. First of all, such a form of worship is not offered to any living person, with some rare exceptions such as religious or spiritual leaders. For ordinary people, such worship is performed only with the photo of a person (such as one's ancestors), who is no longer alive. In such a case, almost exactly the same ritual of worship is followed: anointing the photo with sandalwood paste, adorning it with flowers and then offering the flame to the photo. This ritual can once again be interpreted as offering worship to God, since when one's ancestors are no more, it is believed (and hoped) that they have attained the grace of God. This is the reason one would not perform this puja for living persons, unless they have attained the status of saint or some such association with the divine, making it all the more curious as to why machines should be worshipped in this manner.

One may actually offer a simple explanation to this activity. We may claim that when people are offering puja to their car, for example, they are actually offering a prayer to their god, asking for protection from possible accidents that may befall them in their journey. Therefore, these people are not actually offering prayers to machines, only to their god. This form of explanation is similar to that which can be adduced for offering prayers to Earth or Ganges, by saying that one is not really offering a prayer to a river or land but actually to the goddesses who are the Earth and the river. But this would mean that when we offer this form of worship to a car then we are, in a sense, committing ourselves to saying that there is actually a "god of car" to whom the worship is being offered. However, this is definitely not something that even the practitioners of this ritual would accept.

Moreover, if the puja is merely to ask for blessings and protection from God, why perform the ritual to the machine? After all, one could go to the temple and ask God for protection in whichever way one prefers. Why adorn the vehicle with flowers and offer the flame to it, just as one would for the idol of God? Why make the vehicle the surrogate-idol of God if all one

is doing is praying to God, which can be done in the temple and not on the vehicle per se?

We can try another explanation, something with its genesis quite strongly in Hinduism. This is the belief that god is everywhere and in everything. Extending this argument, we can say that offering prayers to any artefact, natural or technological, is actually offering prayers to God, who is present within that thing. But as we have seen in the earlier examples, this would be too general an argument because many objects are not worshipped in the same way machines (particularly vehicles) are (living persons, for example). Also, there is no consistency in the behavior towards vehicles, which would suggest that the ritual is an acknowledgement of the fact that God resides in that vehicle - this is primarily suggested by the pollution rites, which are not followed in the use of the vehicle, whereas if it is an abode of God or even a place of residence of God, then such rites will be followed. For example, although shoes are removed before entering a temple, they are not removed while entering a vehicle.

Thus, there is a complex and perplexing ambiguity about the way in which we view technology, especially as manifested in this ritual of offering puja to machines. For reasons discussed above, I do not think that only a religious explanation will completely suffice to understand this phenomenon. What this activity informs us, over and above anything else it says about Hinduism and rituals, is the way by which we make meaning of technology in our daily lives. Thus, offering puja to machines says as much about technology and our relationship with it as much as it does about God and religion.

## Culture of Technology

Actually, what this says the most about is the "culturality" of technology. Technology is not just a product or a machine. It is a set of meanings that accrue to such technological objects. The set of meanings that accrue to these objects is generated from many sources, including from the culture of the people who use these objects. For a culture steeped in religion and its symbolism at all levels, the meanings that accrue to technology will also reflect this absorption in religion. These meanings will, in the final analysis, reflect the relationship that we establish with technology. This is a view we can be comfortable with, except for those who believe that technology, based on a particular view of science, is culture-neutral. To these people, we might say that just as observations in science are theoryloaded, so are technological objects meaning-loaded, where possible meanings are derived not just from scientific and technological domain but also from the larger cultural domain.

The Indian experience with technology exemplifies this complexity of the relationship we establish with technology. When Jawaharlal Nehru, the first Prime Minister of independent India, called modern industries the "temples of modern India," he was perhaps unconsciously emphasizing the impossibility of technology to stay outside the influence of religion in this country. Given this context - of technology and culture - we can perhaps better understand the appropriation, not just of technology but of the meanings of technology into religion. While there are many facets to this, I want to point out just one of them.

First of all, the Indian relation with technology is pervaded

by a sense of unease. While there are many reasons for this, a dominant one is the feeling of alienation associated with technology. Until recently, Indians were largely consumers of technology that was developed elsewhere. Even now, India lacks basic manufacturing capacity in some essential areas, while she has paradoxically developed sophisticated technologies in atomic and space programs. Technical education in India, until recent times, was much more theory-based. For the Indian mind, modern technology has always been seen to come from "outside." First it was the British, then the Germans or Russians, and now the Americans. There has never been a time when technology could be internalized into the collective consciousness as something "Indian" (contrast this with the American experience with technology and its role in the shaping of the American imagination).

The unease with technology leads to various ways of relating with it. One is by offering prayers to machines and taking technology into the shelter of something people are familiar with and trust; religion offers one such shelter. Performing puja on machines is not done in the belief that God resides in them or that these machines are representative of some divine being. Offering prayers to machines can thus be seen as an indication of the unease with technology in India, of the outsider status given to technology, and of the natives' attempt to bring the foreign into their fold by appropriating it as part of their rituals.

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Sundar Sarukkai, a member of the Leonardo Editorial Board, is a Fellow in the History and Philosophy of Science Unit, National Institute of Advanced Studies, Indian Institute of Science, Bangalore, India. He received his Ph.D. in Theoretical Particle Physics from Purdue University. Recipient of various fellowships, including the Homi Babha Fellowship and David Ross Fellowship, Sarukkai has been a visiting scholar at MIT and Stanford University and authored the books \*Translating the World: Science and Language\* (University Press of America, 2002) and the forthcoming \*The Philosophy of Symmetry.\* Sarukkai publishes and lectures worldwide in science and philosophy journals and conferences and currently serves as a consultant to a project on the relevance of Gandhian thought to contemporary India. He presently holds a PHISPC Fellowship to write a book on Indian philosophy and the philosophy of science.

A version of this article was published originally published in OutlookIndia.com

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LEONARDO DIGITAL REVIEWS 2003.08

This month, Leonardo Digital Reviews has posted 22 new reviews. Not only has the panel been very busy, but thanks are due to the editorial team for dealing with the increased traffic. To try to provide an overview of the diverse reviews that have been filed

and to do justice to every reviewer would be too onerous a task this month. In any case, it would be of limited value. Perhaps the most useful tactic is to draw attention to a number of items that have been looked at this month.

Roy Ascott's new book, published in March 2003, is a welcome and long-awaited collection of his writings, edited by Edward Shanken. It is reviewed here by Stefaan van Ryssen. Amy Ione continues what seems to be an ongoing discussion of topics concerning consciousness, vision and technology with a review of \*Photography's Other Histories, \* edited by Christopher Pinney and Nicolas Peterson. Some of her themes are also picked up elsewhere: for instance, among a number of items by Robert Pepperell, an account of the "Toward a Science of Consciousness" conference in Prague is a timely and valuable record. We also have reviews of other media: Luisa Paraguai Donatia discusses \*BitArt,\* a webwork by Robert J. Krawczyk and Mike Mosher looks at the DVD \*Seeing/Hearing/Speaking\* by Takahiro Iimura. Among Roy Behrens' contributions are reviews of a number of videotapes and of a website. Finally, we are pleased to be able to publish a review of The 50th Venice Biennale, 2003 by Elaine W. Ng, to whom we are grateful for her contribution.

Finally, returning to the opening remarks concerning the editorial team, it is with regret that our intern, Joshua Long, is about to end his tour of duty in the San Francisco office, where he has supported the Leonardo Digital Reviews project with the virtually invisible task of cataloging and distributing material to the review panel. The efficiency and precision of that job, however, sets the tone for all that follows, and I would like to thank him personally and on behalf of the panel for his contribution. We wish him well in the future.

Michael Punt Editor-in-Chief Leonardo Digital Reviews

In this month's Leonardo Digital Reviews, at

http://mitpress.mit.edu/e-journals/Leonardo/ldr.html:

Leonardo Digital Reviews - AUGUST 2003

The Architecture of Doom, by Peter Cohen Reviewed by Roy R. Behrens

The Art of Teaching Art: A Guide for Teaching and Learning the Foundations of Drawing-Based Art, By Deborah Rockman Reviewed by Roy R. Behrens

The Art of Programming, Sonic Acts 2001 conference book, by Frans Evers, Lucas van der Velden and Jan Peter van der Wenden

Reviewed by Stefaan Van Ryssen

The Gendered World of the Bauhaus: The Politics of Power at the Weimar Republic's Premier Art Institute, 1919-1932, By Anja Baumhoff and Peter Lang Reviewed by R. Roger Remington

BitArt, By Robert J. Krawczyk Reviewed by Luisa Paraguai Donati

Black Mountain College: Experiment in Art, edited by Vincent Katz Reviewed by Roy R. Behrens

Boundary 2, An International Journal of Literature and Culture, co-edited by Keven McLaughlin and Philip Rosen Reviewed by Michael R. (Mike) Mosher

Pierre Bourdieu: Sociology Is a Martial Art, directed by Pierre Carles Reviewed by Roy R. Behrens

Cyberculture, by Pierre L□vy Reviewed by Stefaan Van Ryssen

Enactive Consciousness: Perception, Intersubjectivity and Empathy, Seventh Annual Conference of the Consciousness and Experiential Psychology Section of the British Psychological Society
Reviewed by Robert Pepperell

Fluxus Experience, By Hannah Higgins Reviewed by Roy Behrens

First Kill, directed by Coco Schrijber Reviewed by Roy R. Behrens

In the Mind of the Architect, directed by  $\operatorname{Tim}$  Clark Reviewed by Roy R. Behrens

Photography's Other Histories, edited by Christopher Pinney and Nicolas Peterson Reviewed by Amy Ione

Plants, Patents and the Historian, (Re)membering in the Age of Genetic Engineering, by Paolo Palladino Reviewed by Stefaan Van Ryssen

Realism and Antirealism, edited by William P. Alston Reviewed by Robert Pepperell

Towards a Science of Consciousness 2003: Between Phenomenology and Neuroscience Conference Reviewed by Robert Pepperell

The 50th Venice Biennale, 2003 Reviewed by Elaine W. Ng

Visual Pedagogy, Media Cultures in and beyond the Classroom, by Brian Goldfarb Reviewed by Stefaan Van Ryssen

The New Wave By Itself, directed by Robert Valey and Andre S. Labarth
Reviewed by Roy R. Behrens

Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness, by Roy Ascott Reviewed by Stefaan Van Ryssen

Seeing/Hearing/Speaking, by Takahiro Iimura Reviewed by Michael R. (Mike) Mosher

#### BITART

Website by Robert J. Krawczyk http://home.netcom.com/~bitart/

Reviewed by Luisa Paraguai Donati, Department of Multimedia, Institute of Arts, Unicamp, Brazil, luisa@iar.unicamp.br, http://wawrwt.iar.unicamp.br.

My first impression of this website makes me re-think the conceptual threshold between a piece of mathematical art and a mathematical scientific graphic, both of which seek to create "a tangible experience" of abstract mathematical objects and concepts. This interdisciplinary interface is not a contemporary occurrence but has generated distinct aesthetic outcomes: artists are moved by poetic proposals, which contrast with mathematicians and their accurate representations. Currently, the production of these kinds of images using computers generates works more systematically, producing aesthetic experiences as simulation and visualization through the manipulation of algorithms and programming languages. This use of algorithms can produce a disintegration of symmetry, generating other relations and constructions in the organization of artistic works. In the same way, random options introduce the possibility of instability and unpredictability, breaking the systematic and symmetrical elements by embodying something "accidental" - a recurrent artistic procedure.

The BitArt website formalizes Robert J. Krawczyk's intention, in researching mathematical concepts aesthetically in spirolaterals and a series of related strange attractor equations. In both situations, Krawczyk investigates the possibilities of graphical visualization by describing and manipulating those expressions. In "The Art of Spirolaterals," a gallery shows a variety of spirolaterals and a section with a demonstration version. In another section, Web users can create their own by changing the parameters (turning angles, the number of turns, number of repeats, and all reversed turns) so as to visualize all the reversals without any prior knowledge.

According to Krawczyk, "Spirolaterals were first encountered while investigating space curves and fractals in Abelson. What was intriguing about them was the simple procedure to generate them and the great variety that could result from modifying a small set of parameters." From this experience of investigating the rules of generating spirolaterals, he obtained unexpected designs as results; this unpredictability, under controlled conditions, is what makes spirolaterals of continuing interest for him. The action of compounding forms and structures by changing parameters and using a variety of line thickness has generated infinite possibilities of rhythm, spatial directions, and spatialities and it characterizes the author's aesthetic interest.

In the article on the site, "Dimension of Time in Strange Attractors," Krawczyk explores non-random equations of chaotic processes to generate "spatial forms" that can be visualized and rendered when the element of time is introduced into their

interpretation. By using colored algorithms, he exposes the time element of the computational process that produces images of coherent three-dimensional forms. Consequently, these images can be visually explained by a continuous movement of folding their structure - endless bending and twisting.

Some contemporary artists are also involved in "the action of doing something" by working and playing with numbers in order to obtain and visualize forms, curves and spaces. According to Tania Fraga, "... [ these] artists have potentialized the environment using this 'something' as sign, as symbol, in experiences of presenting and not representing." Consequently, these visual poetics can be understood as a space of possibilities that will be realized (actualized) in a certain moment, as something that "presents the virtual, giving visibility and therefore reality." From the relation between users and graphical presentations, different unities can be revealed - hidden compositions disclosed by the visualization that are not apparent from the theoretical description. This confirms Merleau Ponty's claim that "...art is an operation of the expression - a phenomenon of the expression," that works in the "domain of the possible," evoking experiences that will compose viewers consciousness.

This is a valiant and engaging project, but it is finally slightly disappointing. Considering the site in terms of design, there is a visual and aesthetic difference between its proposal and content. I would have liked to have seen some elements from those curves and forms embodied in the Web design, so as to integrate its aesthetic context with Krawczyk's works.

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TELEMATIC EMBRACE: VISIONARY THEORIES OF ART, TECHNOLOGY, AND CONSCIOUSNESS

by Roy Ascott, Edward A. Shanken, editor, University of California Press, Berkeley, 2003. 428 pp., illus. b/w, trade, \$44.95. ISBN: 0-520-21803-5.

Reviewed by Stefaan Van Ryssen, Hogeschool Gent, Jan Delvinlaan 115, 9000 Gent, Belgium, stefaan.vanryssen@pandora.be.

It is surprising how little has been published about the work and theories of artist, theorist and pedagogue Roy Ascott. A

selection of his own writings have now been collected, selected and edited by Edward Shanken, the executive director of the Information Science and Information Studies program at Duke University. The 28 essays in \*Telematic Embrace\* cover almost 40 years of thinking, teaching and theorizing, and it is not a day too soon for them to become widely available. Future students of "Telematic Art," of the history of interactive arts and of the work of Roy Ascott will be grateful for this book and they will thank Shanken for his clear, well-researched and understandable introductory essay on the artist and his work.

"Telematics" is the translation of the French "tolomatique," a term coined in the 1970s by Simon Nora and Alain Minc in a report on the future of society after the telecommunications revolution. It stands for the integration of telecommunication and information technologies, what we would now more fashionably call ICT or being "wired." For Ascott, who started thinking about telematics even before it was practically available, it means no less than a radical change in the way we deal with and perceive, art, society technology - even ourselves. He understands art as a process in which the roles of artist, object and audience are being dramatically redefined, where change is both inevitable and the essence of the artistic process, and where interactivity between humans by means of technology or between humans and technology is the place where meaning is created. In the global telematic embrace, love is the force that unites individuals, science, art and technology, leading to a new level of consciousness, conceptually akin to the "noosphere" of Teilhard de Chardin or the "cyborgian hivemind" of Peter Russell.

It is impossible to summarize the complexity and wealth of Ascott's work in the space of 750 words, so I urge you to read the essays, one at a time, over a period of a few weeks or months, slowly digesting and preparing for the next bite. Ultimately, you will be able to see for yourself if you want to be embraced, telematically or otherwise, by Ascott's thinking. However, I must say a few things about Shanken's introductory essay, "From Cybernetics to Telematics." Most of this 88-page essay are devoted to an outline of Ascott's work and ideas. Summarizing and sometimes clarifying the essays in the collection, Shanken succeeds in untying several threads and marking significant points of advance in his evolution.

It is certainly brilliantly done, and he shows his unquestionable erudition modestly and without diverting the reader's attention away from the real subject. However, about halfway through the essay, the smell of incense becomes a bit too strong - Shanken gives the impression that Ascott has unerringly foreseen and predicted each and every cultural shift, and even if he has been vague or contradictory on some issues, it certainly was not for a lack of prophetic vision. Ascott is elevated to the status of a guru and an oracle, with supernatural powers to match. And that is a pity because it hides "the real Roy" from view: a mere human who has been struggling, working and studying very hard, who has been on a lifelong quest - for love, for understanding and for a better world - just like most of us - and who deserves to be forgiven for not predicting the rise of Nokia and the demise of democracy. (Don't get me wrong, I don't blame Ascott for not doing so). Shanken could have refrained from interpretations informed with the benefit of hindsight and maintained a bit more distance.

In the final pages of the essay, Shanken takes the first steps "towards a critique of telematic art." In his view, telematic art transcends the dichotomies between art and science, between form and content, between conceptual and objective and between modern and postmodern. "Telematic art offers an artistic metaperspective capable of embodying paradox, dismantling convention, and constructing new visual forms that employ emerging technologies in ways that redefine knowledge and being (p. 88)." If these were the words of the artist, I would not flinch. But they come from an art critic - and a very respected one at that - and I doubt whether they bring me a better understanding of the real impact of Ascott's work.

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#### SEEING/HEARING/SPEAKING

Takahiro Iimura, DVD, Takahiro Iimura Media Art Institute, http://www2.gol.com/users/Iimura/Front/html. Distributed by Heure Exquise!, esquise@nordnet.fr. ISBN: 4-901181-06-8.

Reviewed by Michael R. (Mike) Mosher, Saginaw Valley State University, University Center, MI 48710 U.S.A., mosher@svsu.edu.

This DVD collects a quarter century of videos and texts by the Japanese artist Takihiro Iimura, which are all based upon a single line of text - Jacques Derrida's "I hear myself at the same time that I speak" (in \*Speech and Phenomena and Other Essays on Husserl's Theory of Signs\*). Iimura was inspired by this line to create the several works herein.

Upon launching the DVD, the viewer sees an attract mode consisting of a rapid cycle of still images, atop a sound-bed of speech, multi-tracked into gibberish. Visually punctuated by text reading "I am not seen," or "I see you," the photographic images beneath the words are duotones in blue, occasionally green or reddish brown. We see the artist's bespectacled eyes glasses, his ear, his full face. With a click, we arrive at the disc's interface, juxtaposing black-and-white video stills with color elements for the effectiveness expected of an elegant interactive instructional product.

The first choice on the menu is the work "Seeing." Iimura declares "I See You," then expounds on several related philosophical propositions. We are given the process of the construction of the piece and the positions of cameras 1 and 2, as if we are about to re-assemble the videos in a gallery installation. The work "Hearing/Speaking" begins with Iimura stating "You speak to yourself [at] the same time [that] you have been speaking." Here, we also have directions as if for installation in a gallery or museum. One monitor includes propositions posed in the second person.

Beyond these exploded diagrams, the disk includes three video works and two texts. "Talking to Myself" is a seven-minute video, shot in 1978, where Iimura finds variations inherent in Derrida's quote like a jazz musician riffing on an evocative musical phrase. The algorithms Iimura imposes on the line are almost computer-generated, the second person fed in and new expressions issued. We see the back of the artist's head during some statements, or the camera panning and swinging back and forth over nearly-unreadable text.

"Talking in New York," made between 1981 and 2001, has eight minutes of footage shot on portapak and resembles a Japanese tourist's travel video of New York (perhaps having its origin in that very genre). We see shots from a departing ferry, of people in parks and of Chinatown, Iimura all the while reciting his variations upon Derrida in different locales and environments, silhouetted in low lighting, or under experimental recording conditions, such as placing the microphone 50 feet away.

"Talking to Myself at P.S. 1" was made in 1985. The piece is four minutes documenting Iimura's video installation of the "Talking to Myself" tapes at a New York alternative space, in greenish footage shot by a colleague. In places the source video is fast-forwarded to add an urgency to the gallery-goers, who evidently included musician-producer Brian Eno and the late filmmaker-folklorist Harry Smith.

In "On Talking to Myself," the first of the two texts on \*Seeing/Hearing/Speaking,\* Iimura discusses the "video-reality" of offscreen sound recorded and the "silent voice" of the movement of lips "so that the viewer perceives the sentence repeating itself." What he calls "synch out of synch" is the effect of a time lag between the visual depiction of an onscreen speaker and the words that come from that person's mouth. "What I am trying to achieve in the piece is a communication (senderreceiver within the self) separated by function but integrated by its perception," writes Iimura.

In a chatty May 1979 letter to Iimura from David B. Allison, Derrida's translator, Allison calls Iimura's project an "almost preposterous ambition ... its beauty seems to be in a kind of vertigo, an infinitization of replications, mirrorings, suspected detours, half-forgotten and neglected stops, arrests, reconfirmations and confusions." Allison goes on to liken its "Godbergian Variation" to Bach choral music, to Alain Resnais' movie "Last Year at Marienbad" and to Terry Riley's serial musical composition, "In C." One hopes that the enthusiastic Mr. Allison now has a copy of Takahiro Iimura's DVD - he will find that philosophy plus minimal technique and imagery have produced a cohesive, compact and well-assembled document of an artist's long fascination with what to him has been Derrida's most "epiphanic" text.

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LEONARDO 36:5 - ARTICLE ABSTRACTS

THE OUTSIDER ART OF BURNING MAN

LadyBee (a.k.a. Christine Kristen) ladybee@burningman.com

The author describes art installations featured at the annual Burning Man event at Black Rock City, Nevada. Burning Man is community-based, collaborative and interactive and attracts a unique community of artists, performers and free spirits. The goal of the event is to remove the artist from the world of commerce and competition, emphasizing instead collaboration, cooperation and shared experience.

[ Editor's Note: The issue includes Artists' Statements by numerous Burning Man artists.]

\*UNCOMFORTABLE PROXIMITY: THE TATE INVITES MONGREL TO HACK THE TATE'S OWN WEB SITE

Graham Harwood Harwood@scotoma.org http://www.mongrelx.org

Matthew Fuller fuller@xs4all.nl

\*Uncomfortable Proximity\* is a critical web hack of the Tate Gallery's web site, created by Graham Harwood, a member of the Mongrel collective. Commissioned by Tate National Programmes, it mirrors the Tate's own web site, but offers new images and ideas, collaged from Harwood's own experiences, his readings of Tate works and publicity materials and his interest in the Tate Britain site. A related critical text by Matthew Fuller provides wider cultural context.

\*THE CRYING POST PROJECT:\* A MULTI-PART, MULTI-MEDIA ARTWORK TO MEMORIALIZE GLOBAL SITES OF PAIN

Dennis Summers dennis@quantumdanceworks.com

The author describes \*The Crying Post Project,\* an artwork consisting primarily of wood staffs with solar-powered "cry generators" placed at different sites throughout the globe, at locations of environmental and/or social damage. Its two other components include an interactive 3D web site, which has been created as an alternative, data-rich venue for the project, and a series of digitally created photographic prints designed to capture the artist's emotional response to the sites. The artist also discusses how this artwork has been inspired by his research on the cross-cultural symbolism of trees, the indigenous Australian worldview, mapping theory and the relationship between language extinction and environmental destruction.

THE DILEMMA OF MEDIA ART: CYBERNETIC SERENDIPITY AT THE ICA LONDON

Rainer Usselmann Rainer@usselmann.fsnet.co.uk One year after the 1967 Summer of Love and at a time of considerable political unrest throughout the United States and Europe, "Cybernetic Serendipity - The Computer and the Arts" opened at the Institute of Contemporary Art (ICA) in London to much critical and popular acclaim. This article outlines the conceptual framework of this seminal exhibition and looks at some of the accompanying press reception in order to address a key question: how media art deals with its own historicity and the underlying socioeconomic forces that render it possible. Presented 35 years ago and still paradigmatic for the evershifting boundaries between art, technology, commerce and entertainment, Cybernetic Serendipity epitomizes some of the complicated dynamics that delineate the gamut of media art today.

## LEONARDO ABSTRACTS SERVICE

This month, we are pleased to introduce the Leonardo Abstracts Service (LABS). This project is part of the Leonardo Educators Initiative, which also includes job opportunities (posted in the fineArt Forum), the Leonardo Bibliographies project, which provides reading lists on emerging and key topics in the field, the Leonardo Pathbreakers and Pioneers Art History Project, which provides key primary information for art historians, and the LEA Archive, which provides comprehensive resource and documentation information.

LABS is a listing of Masters and Ph.D. theses in the art/science/technology field, for the benefit of scholars and practitioners. LEA also maintains a discussion list open only to faculty in the field. Students interested in contributing and faculty wishing to join this list should contact lea@mitpress.mit.edu

AUTHOR - Adriana A. de Souza e Silva, silvaad@ucla.educ

THESIS TITLE - Design as Interface of Contemporary Design (Interface da contemporaneidade)

LANGUAGES FAMILIAR TO THE AUTHOR - Portuguese, English, German, French

# ABSTRACT

This thesis analyzes graphic design as an interface of contemporary times. The transition from modern design (functional) to contemporary design (deconstructed) represents a technological change in the process of information transmission and reception. The concept of interface is developed in the light of two different standpoints: first, a historical analysis of graphic design (which includes the history of typography, that is, the basis of the process of visual communication). Second, we study the history of the concept of interface itself. This history focuses on the fact that the change of interfaces has always been related to the way people deal with information.

Finally, the last part of this thesis centers on deconstructionism as a characteristic of contemporary graphic interface. The presence of deconstruction is analyzed both in graphic design and on the design of websites and multiuser environments.

KEYWORDS - interface, design, contemporary, functionalism, deconstruction, typography, Internet, hypertext, www, multiuser environments.

YEAR PUBLISHED/EXAMINED - 1999

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I have served as a Leonardo/ISAST Board member for four years and as Chair of the Leonardo Book Series since 2000. In that time, I have confirmed how crucial Leonardo is to the careers and interests of artists, scientists, engineers and scholars working in our field. The cultural convergence of art, science and technology provides ample opportunity for artists to challenge the very notion of how art is produced and to call into question its subject matter and its function in society.

Articles in Leonardo/ISAST publications are read in over 40 countries across the world. In the past year, in addition to publishing Leonardo, Leonardo Music Journal, Leonardo Electronic Almanac, and Leonardo Digital Reviews, Leonardo/ISAST, in collaboration with MIT Press, also produced two more books in the Leonardo Book Series: \*Uncanny Networks: Dialogues with the Virtual Intelligentsia,\* by Geert Lovink and \*Virtual Art: From Illusion to Immersion,\* by Oliver Grau.

We were present at the ISEA (Inter-Society for the Electronic Arts) conference in Japan, SETI (Search for Extraterrestrial Intelligence) workshop in Paris, and CAA (College Art Association) in New York. We developed new initiatives, including Global Crossings: Cultural Roots of Globalization, the LEA Educators Initiative and ArtsLab. Our plans for the future are equally exciting, including new benefits to members of our community in terms of facilitating collaborations and ensuring quick access to the most stimulating developments in the field, as well as maintaining the highest standards of excellence in our archival journals. But these new initiatives will only happen with the active participation of our community.

The complexity of the times is upon us both technically and culturally. The need for cross-disciplinary ferment, new forms of collaboration and hybrid research enterprises designed to bridge the arts, sciences and technology disciplines is essential to making sense of a rapidly transforming world. Explorations of technology by artists-researchers serve to illuminate not only the potentials of emerging technology but also new structures of production, cooperation, and distribution. Leonardo/ISAST, through all of its activities, provides context for understanding the language and agendas of their production and research.

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Joel Slayton Leonardo/ISAST Governing Board Member Chair, Leonardo Book Series Director, CADRE Laboratory for New Media

P.S. Your donation of \$1000 will make possible the publication of an artist-researcher's article in Leonardo. \$500 will sustain our Reviews project for a month. \$100 will offset the mastering of one track on this year's Leonardo Music Journal CD.

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ISAST NEWS

OLATS NEWS - AUGUST 2003

Symposium Art &and Zero Gravity
http://www.olats.org

Visibility ö Legibility of Space Art. Art and Zero Gravity: The Experience of Parabolic Flights

October 4th and 5th 2003 International Festival @rt Outsiders Maison Europ⊟enne de la Photographie 5/7 rue de Fourcy 75004 Paris M□tro : Saint-Paul

Curated by Annick Bureaud, the Visibility  $\ddot{\text{o}}$  Legibility of Space Art.

Art and Zero Gravity: The Experience of Parabolic Flights symposium is a

joint project between the @rt Outsiders International Festival (http://www.art-outsiders.com) and Leonardo/Olats (http://www.olats.org).

This symposium gathers artists, theorists as well as parabolic flight specialists.

- \* Alex Adriaansens, director V2, Rotterdam
- \* Marcel.li Antunez Roca, artist, Barcelona
- \* Kitsou Dubois, artist, Paris
- \* Kodwo Eshun, Anjalika Sagar, Richard Couzins, artists, London
- \* Vadim Fishkin, artist, Ljubljana/Moscow
- \* Flow Motion (Anna Piva & Edward George), artists, London
- \* Jean-Pierre Haigner□, spationaut, Paris
- \* Nicola Triscott & Rob LaFrenais, Arts Catalyst, London
- \* Roger Malina, astronomer, director of Leonardo, Marseille
- \* Takuro Osaka, artist, Tokyo
- \* Marko Peljhan, artist, director Projekt Atol, Ljubjana
- \* Frank Pietronigro, artist, San Francisco
- \* Thierry Pozzo, researcher, Dijon
- \* Mikhail Ryklin, philosopher, Moscow,
- \* Denis Thierion, parabolic flight director, CNES, Toulouse
- \* Louise K. Wilson, artist, London

Whether it is in the scientific, commercial or artistic field, space exploration introduces extremely diverse practices. This year, the @rt Outsiders International Festival 2003 proposes to investigate some of these practices within the world of contemporary art.

The sensation of weightlessness, of 'floating,' 'flying,' 'freely' in three dimensions, of 'holding still' without support and without fear of falling, is one of the more tenacious dreams, desires 'fantasies?' and surely one of the chief

reasons human beings succumb to the urge to venture outside of their native planet.

For many artists, creating work in, with, for, or about this condition of 'zero gravity' is an artistic re-examination extending far beyond the dream.

With the exception of a few cosmonauts or astronauts who are also painters, such as the Russian Alexei Leonov, to this day no artist has been able to 'live' weightlessness in a durable fashion aboard a space station or the American shuttle. On Earth, the parabolic flight remains the sole means of experiencing this unique condition.

In a parabolic flight, a specially equipped plane describes a series of parabolas in the air (bell-shaped curves with a 45; angle). In the 'climbing' phase, gravity goes from 1 G. (normal terrestrial gravity) to 2 G. for 20 seconds before attaining the weightless phase at the 'top of the curve' for approximately 25 seconds. During the 'descent' phase of the flight, the plane returns to the 2 G. phase for roughly 20 seconds. The cycle is repeated.

Thus, the parabolic flight can be described as a succession of very short periods (2 G. - 0 G. - 2 G. - 1 G) constituting a rather exceptional environment, where the experience of weightlessness is 'framed' by moments of 2 G.

Although access to parabolic flights remains a challenge for artists, to date 22 have been able to work with and within their unique environment.

Thus, we have a very diverse body of work and projects at our disposal (ranging from dance to performance, sculpture, painting, sound/music, video, etc.) by artists from different artistic horizons and diverse cultures (France, Japan, Spain, Russia, United States, Great Britain, etc).

Within the category of space art, creation during parabolic flights constitutes a comprehensive subgroup that defines a 'common base' from which to conduct an artistic and aesthetic analysis of these practices. This is the challenge of this symposium.

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