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The Leonardo Educators Initiative & Abstracts Service
by Nisar Keshvani
nisarh [@] keshvani [dot] com

Fourteen months ago, Leonardo/ISAST announced the Leonardo
Educators Initiative [1] - a multi-faceted programme to reach
out to the academic community. It includes:

* The Leonardo Abstracts Service (LABS) [2] - a comprehensive
database of Ph.D., Masters and MFA thesis abstracts in the
emerging intersection between art, science and technology. It is
designed to give young scholars an opportunity to contribute to
the existing body of knowledge, keep abreast of new
developments, allow established artists/academics to access
upcoming work, use LEA as a resource and create an opportunity
for dialogue amongst individuals with similar interests.

* The Leonardo International Academic Community [3] - a mailing
list to encourage discussion and exchange of ideas (to join
email lea [@] mitpress [dot] mit [dot] edu with a brief
introduction) amongst leaders and thinkers in academia.
Academics also receive the Leonardo International Faculty Alerts
- announcing job and other opportunities in the field.

* A free subscription to the Leonardo Electronic Almanac email
digest for faculty and students: http://mitpress.mit.edu/lea/e-
mail

When first introduced in August 2003, LABS was a rudimentary
system. Scholars would email LEA with their abstracts and we
occasionally published them. Today, almost a year later, we
launch a web-based submission and searching system spearheaded
by Professor Sheila Pinkel from Pomona College.

A call for submissions was announced in June this year and
within three months, LABS received 20-odd abstracts. These
abstracts were peer reviewed by our 2004/2005 panel consisting
of Pau Alsina, Jody Berland, Sean Cubitt, Frieder Nake, Stephen
Petersen and chaired by Professor Pinkel. In this issue, we are
proud to publish the shortlisted, peer-reviewed theses abstracts
by Peter Anders, Elisa Giaccardi, Fatima Lasay and Maureen A.
Nappi.

LABS is now seeking abstracts for its next publication cycle.
Deadline for inclusion is: 10 November 2004. For information and
to submit abstract: http://leonardolabs.pomona.edu

Interestingly, this month's feature "Art by Telephone: From Static to Mobile Interfaces," is written by Adriana de Souza e Silva who holds the honour of being the pioneer author announced in LABS last year [1]. We hope to encourage young scholars like De Souza e Silva, Anders, Giaccardi, Lasay and Nappi to not only submit abstracts but have their research published in an international peer-reviewed journal like LEA.

Adriana's piece discusses the evolution of artworks using telephones, bringing her focus especially to contemporary works using mobile phone technology. Her investigation explores the ramifications of such technology on our notions of space, time and social interaction and the interface between physical and digital spaces.

In Leonardo Reviews, we took a small but rich sampling of the stunning diversity of topics being discussed by the review panel: here we include reviews of a conference on Indian artist Sardari Lal Parasher, a conference on art, science and spirituality, and a documentary film about U.S. activist/author Howard Zinn.

We sincerely hope the Leonardo Educators Initiative [1] continues to meets a need and look forward to hearing your comments and feedback.

Enjoy!

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2. Leonardo Abstracts Service available online at: http://leonardolabs.pomona.edu

3. Leonardo International Academic Community available online at: http://mailman.mit.edu/mailman/listinfo/leofaculty

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ART BY TELEPHONE: FROM STATIC TO MOBILE INTERFACES [1]

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ABSTRACT

This article investigates artworks that use telephones as

interfaces. Considering telephones as telepresence technologies, it focuses on the point of transition from the fixed to the mobile telephone, exploring how artistic practices change when one component is added: mobility. In addition, location awareness capabilities transform cell phones into more than voice devices. Consequences can be perceived in artistic experiences that bring the medium into public spaces, transforming them into ludic and collective interfaces, pointing to how mobile technologies can be used in the future. From a broader perspective, this study addresses how art mediated by technology deals with the connection between physical and digital spaces.

KEYWORDS

Telephones, mobile interfaces, cell phones, virtual, physical, telepresence art.

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This article investigates how the artistic approach toward telephones changes when they become mobile. The transition occurs mainly because cell phones are no longer only voice devices. Mobility and location awareness transform them into social and ludic technologies, giving them the ability to merge physical and digital spaces and for a user to find one's relative position in the globe merely with a personal handset. Examples of artworks with fixed and mobile telephones help to clarify this transition.

Reviewing artworks with telephone handsets helps us to remember how the device has previously been used as an artistic interface and to imagine new approaches when this interface becomes mobile [2].

SOME EARLY EXPERIMENTS IN TELEPHONE-BASED ART

Very early on, some artists started to use telecommunication media to develop projects. Experimenting with remote-controlled creation may have been the first use of telephones to produce art. Laszlo Moholy Nagy, considered one of the first artists to create a telepresence piece, experimented using the telephone to transmit directions for fabricating enamel tile paintings. He wrote:

In 1922, I ordered by telephone from a sign factory five paintings in porcelain enamel. I had the factory's color chart before me and I sketched my paintings on graph paper. At the other end of the telephone, the factory supervisor had the same kind of paper, divided into squares. He took down the dictated shapes in the correct position. (It was like playing chess by correspondence.) One of the pictures was delivered in three different sizes, so that I could study the subtle differences in the color relations caused by the enlargement and reduction [3].

Eduardo Kac suggests that nobody knows whether Moholy-Nagy's story is true or not, because his wife stated that in fact she ordered the paintings in person. Moholy-Nagy's work, however, whether actual or apocryphal, demonstrates that the artist could be removed from the location of artmaking.

In 1969, the Chicago Museum of Contemporary Art organized an exhibition called *Art by Telephone* that to some extent

repeated Moholy-Nagy's experiment. Thirty-six artists were asked to place a phone call to the museum and to instruct museum staff about what their contribution to the show would be. The museum then produced the pieces and displayed them. *Art by Telephone* did not actually explore the telephone as a new artistic medium; the telephone was only used as a remote interface to accomplish something that could be done, for example, if the artist went to the museum and talked to the curator.

Kac says that one of the few creative uses of the technology by an artist in this exhibition was accomplished by Robert Huot [4]. The artist, he writes,

. . . potentially involved all visitors of the museum and attempted to generate unexpected first meetings by employing chance and anonymity. Twenty-six cities in America were chosen, each starting with a letter of the alphabet, and 26 men named Arthur were selected, one in each city. Each Arthur's last name was the first listing under the initial letter of the city (Arthur Bacon, in Baltimore, for instance). The Museum displayed a list of all cities and names, and invited visitors to call and ask for "Art." The work was the unexpected conversation between "Art" and the visitor, and its development totally up to them.

Huot's piece presents the artist as the creator of a context, in which the visitor participates in the creative process. Here the telephone is used to turn art-making into a social experience. Generally, up until the end of the 1990s, artworks that used telephone handsets were almost all restricted to calling another party, using the phone's ring as an artistic element and recording voice messages.

More recent pieces that employed the telephone include the works developed by the Disembodied Art Gallery, a British group that explores conceptual and telecommunication-based art. For instance, *Babble* was a telepresence-art installation created in 1993 that received over 70 voice contributions from the United States, Australia, Japan and Europe. Callers telephoned a U.K. number and could record poetry, stories and thoughts on an answering machine. These messages were then collected and replayed automatically to visitors of the gallery whenever a member of the public entered the installation room. *Temporary Line* (1993-94), another piece by the Disembodied Art Gallery, was an audio-reactive sculpture constructed from telephone handsets. Whenever a member of the public walked close to the sculpture, the sound of whispering voices would dart around the sculpture, from telephone handset to telephone handset, at random around the feet of the visitor.

The common idea behind most of these projects is not so much to explore synchronous communication, as is considered the general use of the telephone, but to investigate the use of a recorded presence or voice as a past presence. Telephones have been considered by some as the ultimate virtual medium because they eradicate the distance between disembodied voices [5]. The telephone thus transforms the pure element of voice into presence: an absent presence. The above-mentioned artists used the communication technology to emphasize not only this removal in space, but also a removal in time, by bringing past recorded voices into the immediate present.

Heath Bunting, a contributor to the Disembodied Art Gallery, created a piece that incorporated the use of the Internet to

reach a more spatially distributed audience. The 1994 piece *Kings Cross Phone-in* scattered numbers of telephone kiosks surrounding the London Kings Cross British Rail station via Internet, asking whoever found the numbers to choose one and call it at a specific time and chat with whoever picked up the phone. Likewise, in December 1996, StaalPlaat, to celebrate their 100th CD release, created *The Answering-Machine Solution CD*, a large collection of 30-second tracks that could be used as answering machine messages. Keith Mendonça, from the Disembodied Art Gallery, provided the front cover for the CD and an answering machine message.

Also using telephones in public space, Stephen Wilson created a telephone-based project called *Is Anyone There?* (1992) over the period of one week in San Francisco. In the project, a computer-based system with digitized voice capabilities made hourly calls to five ringing pay phones on the streets with the aim of involving whoever answered the calls in conversations about life in the city. The system used intelligent response programming to engage passers by into a short dialog. The conversations were then digitally stored in a database and accessible through an installation that included a database of these recorded calls. In the gallery, the installation changed randomly to a real-time mode that placed live calls to the pay phones, linking viewers with a real person on the street. With this piece, Wilson tried to explore random communication between strangers, situating the user in the role of being a content creator. Furthermore, he looked into possible developments for artificial intelligence systems, by analyzing dialogues between computers and humans.

It is possible to perceive two characteristics in the above-mentioned works. First, although the works could have been performed in urban spaces, such as *Is Anyone There?*, they were still connected to a fixed place, such as a payphone. Second, the pieces mostly transmitted voice and stored voice messages. This scenario changes with mobile phones.

MOBILE PHONES: BRINGING THE INTERFACE INTO PUBLIC SPACES

In the last ten years, cellular phones have become a highly popular form of telecommunication technology, exceeding the number of existing fixed landlines and personal computers. Because of its relative affordability, cell phone ownership has increased much more rapidly than PC ownership. This gap is markedly larger outside the U.S. In the United States, the ratio

of people owning cell phones to those owning PCs is fairly close: 54.3% to 65.89% respectively [6]. However, in countries where fixed telephone lines are expensive and not so widespread, the difference is substantial. For example, in Brazil 26.36% of the population owns a cell phone, while only 7.48% have PCs. The same difference applies to other countries in Latin America, such as Paraguay and Mexico. Likewise, in Japan there are more than 86 million mobile users (67.96%) as opposed to 48 million (38.22%) PC owners. Finally, in Finland 90% of the population uses cell phones while only 44.17% have PCs at home.

The large number of cell phones in use worldwide makes them a significant social and communication tool. Moreover, the use of

mobile phones as artistic interfaces both reaffirms their

popularity and indicates new uses for the technology. The artistic use of mobile communication interfaces is an arrow pointing in two directions. First, it draws our attention back to past telephone-based artworks and second, it foresees new uses for the mobile interface. Although in the United States and in most Latin American countries the cell phone is mostly used to speak, much like a "mobile telephone," developments of the mobile Internet, SMS (Short Message Service), camera phones and location-based services, mostly in Japan and Scandinavian countries, transform the mobile into more than a telephone.

Telecommunications-based art is primarily concerned with connecting distant and contiguous spaces. According to Frank Popper [7], communication art has six main characteristics: (1) it stages physical presence at distance, (2) it telescopes the immediate and the delayed, (3) it focuses on the playfulness of interactivity, (4) it combines memory and real time, (5) it promotes planetary communication and (6) it encourages a detailed study of human social groupings. In a broader sense, it can be said that telecommunication art not only foresees new developments for existing technologies, but also changes our perception of space. It focuses on the relationships between participants, rather than on the creation of material objects, in a situation where the author is the context provider, not the content creator.

While the fixed telephone connected specific places, cell phones connect people who roam through urban spaces. Mobility strengthens the playfulness of interactivity, transforming urban spaces into a hybrid reality. Hybrid spaces are created by the merging of physical and virtual spaces. These hybrid spaces incorporate mobility and sociability.

When the cell phone arose, it was generally regarded, as in the early days of the telephone, as a medium to transmit mainly urgent messages [8]. Even now, cell phones are viewed in many parts of the world as mobile telephones, that is, a telephone that can be carried around, used mostly for voice conversations. However, the incorporation of new functions such as text messaging (SMS), multimedia messaging (MMS), and location-based services contribute to the creation of new meanings for the mobile interface. The cell phone's potential for making new art is explicitly highlighted in cities with dense populations, because there is more potential for people to interact with each other. The emergence of nomadic technology devices allows whole cities to be used as a "responsive surface," or as a game board. It is as though the urban space has become a map of itself, a place for interaction and long-distance contact, without the need for a restricted or fixed space.

In the following section, I will discuss works that use cell phones as promoters of collective and social actions in public spaces. They envision the phone no longer as merely a voice transmission device, but also as a musical instrument and a game controller [9].

DIALTONES: A TELESYMPHONY

At the Ars Electronica 2001 in Linz, Austria, Golan Levin and the Ars Electronica Festival used the audience's cell phones to create a music concert at the Brucknerhaus Auditorium. Prior to the concert, members of the audience could register their cell phone numbers in kiosks, after which they would be assigned a seat in the auditorium and have a set of ringtones downloaded to

their phones. Knowing each person's position in the auditorium and their respective ringtones, the computer could call them and produce a musical symphony, which became a product of collective authorship.

This piece was innovative because it used cell phones as musical instruments. Although *Dialtones* was not a communication experience and did not include voice, it can be regarded as a social and collective action occurring in public space [10]. The distance from the mobile phone as a two-way voice communication device becomes even more pronounced when cell phones' power is used to create collective games.

BLINKENLIGHTS: THE CELL PHONE AS A REMOTE CONTROLLER AND GAME DEVICE

In 2001, the Chaos Computer Club transformed an eight-story building in Berlin's Alexanderplatz into the world's largest interactive computer display. One hundred forty-four lamps were arranged behind the building's front windows and were independently controlled by a computer to produce a monochrome matrix of 18 x 8 pixels. Users could "control the building's façade" either via their cell phones or the Internet, creating animations, playing Pong, or sending love letters.

Participants could use their mobile phones to call a specific number and play Pong against the computer. At first, they heard instructions like "use the 5 to move the paddle up and 8 to move it down." If a second person called the system simultaneously, one caller played against the other. The difference between *Blinkenlights* and an ordinary computer game was the size of the "screen": a whole building in the middle of "Alex."

Blinkenlights transformed cell phones into game devices and brought the game board/screen outside into social urban spaces. The enlargement of the game board to the size of a building façade immersed large numbers of players and passersby into the game, transforming physical space into the game board. The possibility of carrying around the game control (that is, the cell phones) allowed people to interact with the screen and with each other in an open space. *Blinkenlights* explored the cell phone's potential to engage large groups of urban users and viewers in a hybrid space that is both virtual and physical.

BROADENING THE CONCEPT OF MOBILE TECHNOLOGIES: BLAST THEORY

Although the British group Blast Theory did not initially work with cell phones, their projects foresee new ways mobile communication devices may function in the near future. In conjunction with the Mixed Reality Lab at the University of Nottingham, England, Blast Theory employs handheld computers and wireless devices to mix physical and virtual spaces, transforming the city into a playful multi-user experience. Their work focuses on developing games that occur simultaneously in physical and digital spaces, integrating and forming communities between online players and players who walk on the street. In their games, an action in the physical space might influence a decision in digital space and vice versa.

Blast Theory's first collaboration, *Can You See Me Now?* [11], resembled a traditional Pac-Man video game played in hybrid space. Players from anywhere in the world could play online against the members of Blast Theory. Tracked by satellites, Blast Theory's runners appeared on a virtual map of the city

center next to online players. On the streets, handheld computers showing the position of online players guided the runners in tracking online players down. Street runners were equipped with handheld computers connected wirelessly to the Internet, GPS receivers and walkie-talkies to communicate with other users. Up to 20 people could be online simultaneously. Online players ran away from street players in order to elude capture. If a street runner caught a virtual player, she was supposed to take a picture at the place where the chase ended, which was obviously an empty space. Street runners caught an online player if they were within 5 meters of each other. The game has so far been played on specific days in Sheffield (UK) in 2001, in Rotterdam (Holland) in February 2003, and in Oldenburg (Germany) in July 2003 [12].

Similarly, Blast Theory's recent collaboration, *Uncle Roy All Around You* [13], sets online players alongside players on the streets. Street players search for Uncle Roy with the aid of handheld computers. On the other hand, online players search for the street players and also for Uncle Roy in a virtual model of the same physical area where the street players are running. Online and street players must work together, and they have 60 minutes to complete the task. Street players can see online players on the maps of their handheld computers and online players can see street players in the virtual modeled city. During the gameplay, online and street players can communicate through walkie-talkies and ask each other for help. The game was played in 2003/2004 in Westminster, Manchester and West Bromwich (UK).

With the increasable availability of 3G phones, which incorporate all of the above-mentioned features [14], Blast Theory started using cell phones as their primary interface. Their most recent project, *I Like Frank* [15], is a similar experience that uses 3G cell phones to connect virtual and physical players in Adelaide, Australia (2004). Blast Theory looks to establish cultural spaces for mobile devices via games. Future games might allow the public to play on the streets using their own cell phones. The rapid worldwide spread of "smart" phones may increase the potential for this type of games and ludic experiences with cell phones to bring together users in different and distant places in the world.

Within this context, it is important to understand that when mobility was added to telephones, they became more than mere mobile phones. Mobility brought new artistic meanings to the telephone interface: bringing phones into the city space, releasing them from a fixed place, transforming them into collective/social mediums and ludic devices. Henry Jenkins suggested that "games have been to the PC what NASA was to the mainframe - the thing that pushes forward innovation and experimentation" [16]. Location-based activities will play the same role for cell phones, differentiating them from fixed phones and increasing their power for communication and community formation.

Mobile and pervasive technologies help us to be aware of the physical space in which we live. Digital technologies in the 1990s were mostly criticized for creating sociability in a virtual space that was disconnected from our reality, placing users in a simulated and "unreal" world. Mobile technologies bring these multiuser and playful experiences to physical spaces, encouraging users to go out on the streets and bringing new meanings to familiar spaces.

As art always foresees new uses for technologies, it is wise to look at these artistic experiments and try to picture the future, imagining how contemporary society will incorporate mobile devices into its everyday activities. Mobile phones are no longer just telephones.

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* IMAGES ACCOMPANYING THIS ARTICLE CAN BE SEEN AT THE LEA WEBSITE: <http://lea.mit.edu>

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1. This article comes from my Ph.D. dissertation, entitled *From Cyber to Hybrid: Relocating our Imaginary Spaces through Mobile Interfaces*, defended in the School of Communications at the Federal University of Rio de Janeiro, Brazil (2004).

2. Other telecommunication media, such as satellites, slow-scan TV and even those that use the telephone network, such as modems, videophones and telefacsimiles, are outside the scope of this review. Examples of telepresence art with satellites and the transmission of data via modem, faxes and slow-scan TV include *Hole in Space* (1980) from Kit Galloway and Sherrie Rabinowitz, and *The World in 24 Hours* (1982) from Robert Adrian. Other examples can be found in Stephen Wilson, *Information Arts*, Cambridge, MA: MIT Press, 2002; Frank Popper, *Art of the Electronic Age*, London: Thames and Hudson Ltd. and Harry N. Abrams Inc., New York, 1993; and Heidi Grundman, ed., *Art Telecommunications*, Vancouver, Canada, and Wien, Austria: Western Front, 1984.

3. Laszlo Moholy-Nagy and Eduardo Kac, "Aspects of the Aesthetics of Telecommunications," in John Grimes and Gray Lorig, eds., *Siggraph Visual Proceedings*, New York, NY: ACM (1992) 47-57. <http://www.ekac.org/Telecom.Paper.Siggrap.html> (1 September 2003).

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7. See Frank Popper, *Art of the Electronic Age*, New York, NY: Harry N. Abrams, Inc. (1993) p. 127.

8. See Diane Zimmerman Umble's article, "Sinful Network or Divine Service" in Lisa Gitelman and Geoffrey B. Pingree, *New Media - 1740-1915*, Cambridge, MA: MIT Press, p. 143. About the

first days of the telephone in Lancaster, England, around 1910, she writes: "Telephone company advertising in the village weekly newspapers amplified these themes by emphasizing the value of the telephone in times of emergency: accidents, fires, illness, stolen horses, mad dogs, robbers and threatening weather."

9. Other examples of artworks with cell phones can be found at Stephen Wilson's compilation under "Telecommunications: Telephone Art/Cell Phone" <http://mercury.sfsu.edu/~infoarts/links/wilson.artlinks2.html> (16 August 2004), and in Golan Levin's list, "An Informal Catalogue of Mobile Phone Performances, Installations and Artworks" <http://www.flong.com/telesymphony/related/index.html> (16 August 2004).

10. An earlier work combining telephones and music was *Telefonmusik, Wiencouver IV* (1983), discussed in Heidi Grundman, ed., *Art Telecommunication*, Vancouver, Canada: A Western Front Publication, pp. 112-125 (1984). However, whereas this project was mostly concerned with the idea of transmitting and receiving music over the telephone, *Dialtones* transformed the cell phone into the musical instrument itself. One of the major characteristics of the 1983 project was the limited frequency bands that the telephone could provide for music broadcast. In 2001, MIDI (Musical Instrument Digital Interface) ringtones enabled the creation of polyphonic musical compositions simulating an orchestra on the handset.

11. See Blast Theory <http://www.blasttheory.co.uk/work_cysmn.html> (26 January 2004).

12. *Can You See Me Now?* was nominated for an Interactive Arts BAFTA in 2002 and won the 2003 Prix Ars Electronica Golden Nica for Interactive Arts.

13. See Blast Theory <http://www.uncleroyallaroundyou.co.uk/> (26 January 2004).

14. This stands for Third-Generation Cellular System. "Third-Generation Cellular Systems include the possibility to offer data services without the need of establishing a connection (permanent connection) and speeds up to 2 Mbps. The main systems are WCDMA and CDMA2000 1xEV. The ITU refers to 3G as IMT-2000." <http://www.teleco.com.br/glossario.asp?termo=3G> (10 January 2004).

15. See Blast Theory <http://www.ilikefrank.com> (17 May 2004).

16. Henry Jenkins, "Games, the New Lively Art." <http://web.mit.edu/21fms/www/faculty/henry3/GamesNewLively.html> (16 August 2004).

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AUTHOR BIOGRAPHY

Adriana de Souza e Silva is a senior researcher at the Graduate
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on how communication interfaces change our relationship to space
and create new social environments. Her dissertation, titled
"From Multiuser Environments as (Virtual) Spaces to (Hybrid)
Spaces as Multiuser Environments - Nomadic Technology Devices
and Hybrid Communication Places," studied the passage from
cyberspace as a social environment to hybrid spaces enacted by
nomadic technologies (cellular phones). Adriana holds a master's

degree in communication and image technology from the same
school.

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The Leonardo Abstracts Service (LABS)is a comprehensive
database of Ph.D., Masters and MFA thesis abstracts 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, which in some way investigate philosophical,
historical, or critical applications of science or technology to
the arts, are invited to submit an abstract of their thesis for
publication consideration in this database.

The LABS project does not seek to duplicate existing thesis
databases but rather to give visibility to interdisciplinary
work that is often hard to retrieve from existing databases. The
abstracts are available online at Pomona College, Claremont,
California, so that interested persons can access them at no
cost.

Authors of theses interested in having their thesis abstract
considered for publication should fill out the Thesis Abstract
Submittal form at http://leonardolabs.pomona.edu

The English language peer review panel for 2004/2005 are Pau
Alsina, Jody Berland, Sean Cubitt, Frieder Nake, Sheila Pinkel
and Stephen Petersen.

LEA also maintains Leonardo International Academic Community -
a mailing list to encourage discussion and exchange of ideas (to
join email: lea [@] mitpress [dot] mit [dot] edu with a brief
introduction) amongst leaders and thinkers in academia.
Academics also receive the Leonardo International Faculty Alerts
- announcing job and other opportunities in the field.

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LANGUAGES FAMILIAR TO THE AUTHOR
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THESIS TITLE
A Procedural Model for the Integration of Physical and
Cyberspaces in Architecture

ABSTRACT
This dissertation articulates opportunities offered by
architectural computation, in particular the digital simulation
of space known as virtual reality (VR) and its networked, social
variant cyberspace. Research suggests that environments that
hybridize technologies call for a conception of space as
information, i.e. space is both a product of and tool for
cognition. The thesis proposes a model whereby architecture can
employ this concept of space in creating hybrids that integrate
physical and cyberspaces.

The dissertation presents important developments in
architectural computation that disclose concepts and values that
contrast with orthodox practice. Virtual reality and cyberspace,
the foci of this inquiry, are seen to embody the more
problematic aspects of these developments. They also raise a
question of redundancy: If a simulation is good enough, do we
still need to build? This question, raised early in the 1990's,
is explored through a thought experiment - the Library Paradox -
which is assessed and critiqued for its idealistic premises.
Still, as technology matures and simulations become more
realistic the challenge posed by VR/cyberspace to architecture
only becomes more pressing. If the case for virtual idealism
seems only to be strengthened by technological and cultural
trends, it would seem that a virtual architecture should have
been well established in the decade since its introduction. Yet
a history of the virtual idealist argument discloses the many
difficulties faced by virtual architects. These include
differences between idealist and professional practitioners, the
failure of technology to achieve its proponents' claims, and
confusion over the meaning of virtual architecture among both
architects and clients.

However, the dissertation also cites the success of virtual
architecture in other fields - Human Computer Interface design,
digital games, and Computer Supported Collaborative Work - and
notes that their adoption of space derives from practice within
each discipline. It then proposes that the matter of
VR/cyberspace be addressed from within the practice of
architecture, a strategy meant to balance the
theoretical/academic inclination of previous efforts in this
field. The dissertation pursues an assessment that reveals
latent, accepted virtualities in design methodologies,
instrumentation, and the notations of architectural practices.
Of special importance is a spatial database that now pervades
the design and construction processes.

The unity of this database, effectively a project's cyberspace,
and its material counterpart is the subject of the remainder of
the dissertation. Such compositions of physical and cyberspaces
are herein called cybrids. The dissertation examines current
technologies that cybridize architecture and information
technology, and proposes their integration within cybrid wholes.
The concept of cybrids is articulated in seven principles that
are applied in a case study for the design for the Planetary
Collegium. The project is presented and critiqued on the basis
of these seven principles. The dissertation concludes with a
discussion of possible effects of cybrids upon architecture and
contemporary culture.

KEYWORDS
cyberspace, mixed reality, architecture, art, virtual reality,
design, augmented reality, design computing

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THESIS TITLE
Principles of Metadesign: Processes and Levels of Co-Creation
in the New Design Space

ABSTRACT
Metadesign is a term that has been used with reference to art,
cultural theories, and design practices (from graphic design to
biotechnological design) since the 1980s. Metadesign is neither
an established discipline nor a coherent theory. It is rather
the expression of a set of concerns and intentions, calling for
an expansion of the creative process in the new design space
engendered by information technologies.

This study provides an understanding of metadesign. It improves
its conceptual framework and methodology, by deconstructing the

trajectory along which the notion has developed and has been applied in the last decades, and establishing a transdisciplinary dialogue with the aesthetics and practice of interactive art. Such a study contributes to a new idea of design, and to identify a new design space. Rather than proposing a new \model of design\, the work promotes a new \mode of design\: a shift in design culture from planning to seeding (or emergence). It is a belief of the author that such a \mode of design\, identified as a set of principles organized in different and complementary design planes, might enable people to manage the construction of their environment and their relationships with the world in a co-creative manner.

In conclusion, the thesis offers: (1) an understanding of metadesign as a design culture emerging from current design and cultural theories; (2) an integration and advance of the conceptual and methodological framework of metadesign in light of the concept of co-creation; and lastly (3) the development of the idea of a multifold design space, and the identification of specific design principles.

KEYWORDS
metadesign, interactive art, co-creation, emergence, design space, design theory, design culture, art practice, aesthetics, transdisciplinarity

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THESIS TITLE
Phase Space Portraits of the Nuestra Señora delos Dolores of Baclayon

ABSTRACT
This thesis investigates a contemporary idol-making that uses the mathematical concept of recurrence plots to express the magical identity that exists between sacred entities and perceptible form. This thesis presents ways by which the use of the mathematical concept of recurrence plots have assisted in determining the coloring of patterns and the design of planar symmetry for three-phase space portraits of the Dolorosa, a nineteenth-century Spanish colonial sculpture. By digitization, the additive color signals of an image of the Dolorosa were processed to yield patterns by which symmetries were motivated. This study provides a new method for pattern formation that artists can utilize where aesthetics and mathematics converge using analog and digital studio materials and processes. Recurrence plots and the use of software that explore their importance as visual qualitative analysis tools deserve further investigation by artists who seek new modes of creating new symbols.

KEYWORDS
recurrence plots, religious sculpture, dynamical systems, glass engraving

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THESIS TITLE
Language, Memory and Volition: Toward an Aesthetics of Computer
Arts

ABSTRACT
This dissertation, Language, Memory and Volition: Toward an
Aesthetics of Computer Arts, constructs an aesthetic framework
for computer arts based on the most fundamental operational
components of the computer: language, memory and volition.
Virtually absent in other artistic media, language, memory and
volition are uniquely commingled and embedded in the very
processes of our computational means. This dissertation searches
for traces and mirrors of cultural discourse to determine how
they might be applied to a new or revised critical theory of
computer arts. As the primacy of process within the computer is
a reflection of how we think we think, the computer as a meta-
tool, is an integration of cognitive processes with various
skill sets.

The praxis and skill sets intrinsic to art making continue
aesthetic and historical traditions. Historical sequence,
however, is not without its ruptures, ruptures which
periodically signal a hermeneutic overhaul and review of our
critical and cultural assumptions embedded within the production
of our aesthetic theories. Such a rupture is noticed with the
employment of computers in contemporary art making. For an
increasing number of artists the computer has become the means
and/or site for making art. Computer arts describes artworks
created through the use of a computer or computer systems,
including visual imagery, text or literary works, and music or
dance performances, as well as sound and audio installations,
whether interactive or not. These works are not restricted to a
specific discipline, genre or output medium and do not
necessarily require the presence or operation of the computer
during the aesthetic experience, as is the case with interactive
installations and performances. Computer arts form a praxis in
which artists actively engage and appropriate technology and
infuse it with their own visions. Computer artists have had to
mediate between the economies and ideologies within the dominant
art world and the commercial environment of product development
and consumer markets.

As early as the 1950s, artists started to create art using
analog computers, which were later followed by digital systems.
Throughout the span of its almost 50-year history, with multiple

transformations of system configurations, artists have persisted in utilizing the computer for creative expression. Although there is an acknowledged history of computer arts, no codified aesthetic methods that are applicable to computer arts has been established. Through an investigation of the utility of language, memory, and volition, three selected computer art works are interpretatively analyzed on the basis of the proposed aesthetic framework. They are: ComplexCity by John F. Simon, Jr.; Protrude, Flow by Sachiko Kodama and Minako Takeno; and Illuminated Universal Turing Machine by Roman Verostko.

KEYWORDS
aesthetics, computer arts, process, language, memory, mnemotechnics, volition, embodied logic

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     |        LEONARDO REVIEWS        |
     |            2004.10             |
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Among the fifteen reviews published this month, there is a surprisingly strong political, or geopolitical, voice. Bill Seeley and Andrea Dahlberg remind us that modernism was a historically specific social as well as stylistic moment in the arts. Eugene Thacker's coverage of *Desert Island and Other Texts, 1953-1974* sets the philosophical stage for a review of the *Colloquium on Art/Science/Spirituality Reconnections Within

Emerging Planetary Cultures and A Moment in Time: The Sardari
Lal Parasher Retrospective*, by Judy Kupferman and Aparna
Sharma, respectively. We are delighted to have reviews of events
away from the familiar epicenters of culture. The geopolitical
shifts that they highlight are also reflected in Stefaan van
Ryssen's attention to Davide Grassi and Allan Graubard on *Kazuo
Ohno's World: From Without and Within*. The homegrown
contribution to this politically conscious strand of the reviews
comes from Amy Ione's reaction to *Howard Zinn: You Can't Be
Neutral on a Moving Train.*

Elsewhere, more familiar but no less compelling issues are
raised by Mike Mosher, Kasey Asberry, Jan Baetens and Rob Harle.
These contributions, ranging from bacteria to memory through
computer gaming, make it a rich month at Leonardo Reviews, which
we hope has a direct relevance to the Leonardo Community.

These reviews and the archive can be read at
http://leonardoreviews.mit.edu

Michael Punt
Editor-in-Chief
Leonardo Reviews

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OCTOBER 2004

AngloModern: Painting and Modernity in Britain and the United
States, by Janet Wolff
Reviewed by Bill Seeley

Chronophobia: On Time in the Art of the 1960s, by Pamela M. Lee
Reviewed by Andrea Dahlberg

A Colloquium on Art/Science/Spirituality Reconnections Within
Emerging Planetary Cultures: First Melilla Festival for the Five
Cultures
Reviewed by Judy Kupferman

Davide Grassi 02-04, Selected Works, by Bojana Kunst, Igor
Spanjol, Ana Buigues, and Antonio Caronia
Reviewed by Stefaan Van Ryssen

Desert Island and Other Texts, 1953-1974, by Gilles Deleuze;
Edited by David Lapoujade
Reviewed by Eugene Thacker

A Field Guide to Bacteria, by Betsey Dexter Dyer
Reviewed by Kasey Asberry

First Person: New Media as Story, Performance and Game, edited
by Noah Wardrop-Fruin and Pat Harrigan
Reviewed by Jan Baetens

Howard Zinn: You Can't Be Neutral on a Moving Train, by Deb
Ellis and Denis Mueller
Reviewed by Amy Ione

Kazuo Ohno's World: From Without and Within, by Kazuo Ohno and
Yoshito Ohno
Reviewed by Allan Graubard

Memories Are Made of This: How Memory Works in Humans and
Animals, by Rusiko Bourtchouladze
Reviewed by Rob Harle

Me + +: The Cyborg Self and the Networked City, by William J.
Mitchell
Reviewed by Michael R. (Mike) Mosher

A Moment in Time: The Sardari Lal Parasher Retrospective, by
The Sarnir Foundation and the Visual Arts Gallery
Reviewed by Aparna Sharma

Monstrosities: Bodies and British Romanticism, by Paul
Youngquist
Reviewed by Stefaan Van Ryssen

Navigating Stevenson: Digital Artworks by Sara Gadd, National

Galleries of Scotland, Edinburgh, 2003
Reviewed by Michael R. (Mike) Mosher

A New York Minute, by Alan Licht
Reviewed by Stefaan Van Ryssen

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A MOMENT IN TIME: THE SARDARI LAL PARASHER RETROSPECTIVE

Presented by The Sarnir Foundation and the Visual Arts Gallery,
India Habitat Center, New Delhi, India
1 - 13 August 2004
WWW: http://www.indiahabitat.org/vag/vag2k4/august2k4_f01.htm.

Reviewed by Aparna Sharma
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A Moment in Time: The Sardari Lal Parasher Retrospective was a
fortnight-long exhibition that brought together some of the rare
works by one of modern India's significant visionaries, artist
Sardari Lal Parasher (1904-1990). A series of discussions and
panels throughout the event provided insight into the work of an
artist and thinker sparsely mentioned in Indian art and history
texts. Having participated in the most tumultuous times of
Indian history (i.e. the independence struggle, partition and
the subsequent massive efforts at nation-building), Parasher
speculated deeply on the idea of modernism and how modernity
would be visualized in the Indian context. This project indeed
was and continues to be complex; for the investment of India's
cultural specificity cannot be accomplished without evoking
Indian philosophical thought, embedded in all disciplines,
including the arts. The points of contact and sharp variations
between the tenets of modernism as it emerged in the West and in
the Indian tradition inject as much rigor as disputation into
situating modernity within the Indian locale.

Parasher's work is characterized by a sense of transition - one
that resists resolution. His work emulates both the immediacies

of the environment he encountered (having migrated to India upon partition and served as a commandant of a refugee camp in Punjab) and a timeless, spiritual almost hypnotic quality. His *Partition Sketches*, the most moving series, reflects intensely the agonies the end of the imperial era brought to the subcontinent. With great concern and dignity, the sketches portray the silence, grace and resilience of those who migrated in the mass exodus. The rest of his works, too, are laden with an almost imperceptible sense of anxiety, felt in the vibrancy and tensions in the compositions.

The formal and material aspects of the work are subtly luring. They are underpinned by a deep personal response to the Indian aesthetic tradition as enshrined in India's ancient texts. The curvilinear form and the motif of *shakti* (energy, the female goddess/principle) occur often. In one of his statements, Parasher termed his approach as *pranantarik* (prana, or life-force, bound inwards): "it is individual, diffused . . . an upsurge of *prana shakti* or vital life-force." One can hardly encapsulate the experience of participating in his work. And it is in precisely this way that the Indian tradition is invoked fully in Parasher, as the aesthetic experience is more than visual or as pertaining merely to the form or content of the work.

Responding to Parasher's thinking, the talks and seminars at the retrospective also delved into the question of modernity. They succeeded in injecting necessary complexity into the idea of modernity and, more specifically, textuality. The first seminar, "Posting Modernity in India as a Question Mark," interrogated modernism as a universal and temporally consistent encounter. Author and art critic Gita Kapur succinctly emphasized ideological investigations for contextualizing modernity and extrapolating it from Western hegemonic discourses. The most active sites of contest, she noted, fall outside the West, where the experience of modernity has been disjunctive and dialogic for categories such as the subaltern. The moments of disjuncture, which are widely discussed within post-colonialist discourse, command possibilities for empowerment as they make occasions for "reinventing and reinscribing oneself in history and politics," in Kapur's words.

The discussion following the panel concluded that modernity outside the European and North American nexus was chronologically variegated in comparison with the dominant West and within national formations, where it has neither been unified nor blended. This hinted at the ignorance, universalizing and dominating tendency in the preoccupations and concerns of some Western academics with respect to the "breakdowns" instituted by late capitalism. The dalit movement in India, the ecofeminist struggles across portions of the "Third World," political assertions on behalf of peripheral states: these are situated in moments of discontinuity with dominant ideological discourses that force an examination of modernism.

In this sense, the unity inscribed in the understanding of history also comes under scrutiny. The second seminar, Archaeology of Time, which comprised a cross-section of intellectuals and artists, traversed such territory. The smooth notion of cyclical time, say, in terms of the Yuga theory pertaining to ancient India, was one instance that was critiqued as being monolithic and contestable. Reviews such as this reveal the exoticism, glorification and innocence ascribed to cultures

commonly termed as "native" or "other" within the framework of dominant ideologies, not only from the West.

The experience of time as heterogeneous, multi-layered and coexistent, as suggested at the seminar, throws open possibilities for text-making where time is not simply linear and its experience not unitary. In this context, an earlier talk by author and publisher Urvashi Butalia, who responded to Parasher's *Partition Sketches*, was particularly significant. Urvashi belongs to the second generation after partition. Having spotted the same silences in Parasher's sketches as she had encountered while researching her celebrated book on the subject, *The Other Side of Silence*, she emphasized that the inter-generational dialogue transcended the bounds of time, gender and disciplines. At the same time, the specificities of successive generations make for an altogether different idiom, which is more distanced and employs different language. Instead of viewing the "dissolution" of sentiment with pessimism, Urvashi suggested that the distance of later generations be viewed as a source for resolution. This suggestion is crucial to textuality, as the binarisms of inside/outside, within/without are confused, with the confusion serving as a hybrid site, enunciating from where new visions and more critical juxtapositions can be infused.

Another insightful intervention was film scholar Gayatri Chatterjea's introduction to her developing research into early Indian cinema. Gayatri concentrated on the percolation of traditional Indian visual culture. Using clips from the films *Devdas* (1935) and *Jogan* (1951), she noted that the movement instilled by the cinematic apparatus "shook" the iconic image, investing it with narrative and transforming the sacred into the erotic, as in the examples she used. The Indian aesthetic tradition is further imbibed in camera movements and patterns of editing particular to that era. These do not merely feed into the construction of narrative; their import lies in their reversal of dominant cinematic codes, be they from the industries of the West at that time, or those that developed later in India. Gayatri suggested the early cinematic image as secular, implicated in cross movements, and thus a site of exchange between multiple discourses. It could thus be seen as more sophisticated and fine, engaging the audience more profoundly than the contemporary popular image.

While most of the proceedings at the retrospective were stimulating, the seminars would have developed more cogently with deeper speculation on some philosophical aspects of the discussions, had the program schedule permitted. The panels too could have benefited from a more geographically and intellectually diverse representation. And while the retrospective accorded Sardari Lal Parasher an acknowledgement long overdue and confronted crucial issues, it remained wanting in rigor and coherence. Parasher had noted the preoccupation of

the arts of the modern world with "mannerism or formalistic problems of painting and its language" and, without fully separating from these movements, he attempted to imbibe insights and realizations from ancient Indian culture. The retrospective was more liberal and informed, viewing modernity with necessary skepticism but without becoming too cynical.

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A COLLOQUIUM ON ART/SCIENCE/SPIRITUALITY RECONNECTIONS WITHIN
EMERGING PLANETARY CULTURES

1st Melilla Festival for the 5 Cultures
Melilla, Spain, 18-20 July 2004
Web Address: http://www.melillafestival.org.

Reviewed by Judy Kupferman
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The city of Melilla recently held its first International
Festival of Cultures. This included a colloquium on
Art/Science/Spirituality, which took place in Melilla on 18-20
July. The colloquium was sponsored by the City of Melilla
together with Leonardo and the Al Andalus Foundation. Melilla is
a surprising town: it is located on the north coast of Morocco
but has belonged to Spain since 1497. It features the most
spectacular display of modernist architecture outside Barcelona,
along with an ancient fortress and a lovely seafront. Perhaps
its main distinction is the fact that many cultures live there
in harmony: Moslems, Jews, Christians, Hindus and Gypsies walk
through its streets with no apparent tension. The conference
reflected this diversity and was, therefore, unusual. In
addition to the colloquium, the festival featured an exposition
of art and concerts on the beach, representing the various local
cultures.

The subject of the colloquium was art, science, and
spirituality, with emphasis on Middle Eastern culture.
Participants varied accordingly; rarely have I seen such a
variegated set of people, and the remarkable experience of the
conference was in getting to know people from areas both
geographic and professional with whom I would never otherwise
have come into contact. In addition, we were from very different
cultural and religious backgrounds, and thus meeting on neutral
ground provided a rare opportunity to begin to understand the
different cultures and world-pictures. After all, the main theme
behind the varied subject matter was the world-picture and how
we grasp the universe and our place in it, be it as scientists,
artists, people of various faiths and disciplines.

The moving spirits behind the conference were Mohammed Aziz
Chafchaouni of Morocco; Roger Malina of Marseille,
astrophysicist and editor of Leonardo; and Julien Knebusch of
Leonardo/OLATS in Paris. Participants at the conference included
scientists, artists, and scholars from India, Egypt, France,
Spain, the U.K. and the U.S. Our Israeli contingent included
Eshel Ben Jacob, physicist and president of the Israel Physical
Society; Yael Katzir, former student who now works with
bacterial art; Neora, digital artist; and myself, a theater
lighting designer and physics student, with one foot in each
world, so to speak. We did not know quite what to expect when we
were invited and were impressed and surprised by the experience.
For us, as for many of the others, it was a rare opportunity to
meet people from very different cultures and viewpoints. This
situation involved a certain amount of strain at times and was
not always an easy experience. However, the festival activities
smoothed out this strain in many ways. Strolling together
through the art exposition and listening together under the
stars to a thrilling flamenco performance - all these helped in
bridging barriers that were not at all trivial. The warm and
special atmosphere of the city contributed a great deal. Melilla
is a relaxed place: drivers do not honk their horns, women in
full Moslem dress stroll side by side with girls in strapless

tops, and nobody seems disturbed by this site. People smile

easily and are friendly to strangers.

The conference included four sessions: the first dealt with the relationship between art, science and spirituality; the second with the role of computer software in future culture; the third focused on Islam and on art, science and spirituality within the Arabian-Spanish world; the fourth centered around the influence of cultural background on approaches to art and science. A few examples of the lectures may offer some idea of the content. This brief survey necessarily omits other interesting presentations, but I have tried to give some idea of the variety offered.

Roger Malina's lecture dealt with the tension between the different cultures of art and science as well as those of engineering and technology, of different world views and religions, and of regionalism. Other lecturers embraced technology as embodied by the Internet: Mohammed Aziz Chafchaouni, together with American Harold Brokaw, described their "Virtual Geodesy," an interactive computer program that attempts to create relationships between scientific data and cultural content. Karla Schuch-Brunet of Brazil gave a survey of the use of the Internet as a vehicle for social reform in Brazil. Dr. Fathi Saleh of Egypt described the website he has set up of Egyptian heritage (http://www.cultnat.org).

Some lectures centered around the arts and literature. Leila Khalifa of France spoke of the concepts of time and space in the work of Ibn 'Arabi and Neora (neora.com) of Israel described her experimental theater production of "Medea_Ex." This piece used a virtual 3D mythological universe projected around the audience, and the audience, represented as the chorus, influenced the action using SMS messages. Dr. Sangeetha Menon of India spoke of consciousness research in light of Indian dance drama.

Dr. Ahmed Moustafa, renowned Islamic researcher and artist, discussed the geometric form of Arabic script and its spiritual significance. Dr. Moustafa's talk focused on the square-shaped dot and its relationship with the shapes of letters. In accordance with the system of Arabic script devised by Abbasid Wazir Ibn Mugla in the ninth century, this reflects images of Islamic mystical thought. Dr. Moustafa also spoke of the cube, and, indeed, his own artwork - a multicolored structure of cubes on cubes - was on view in the exposition. Professor Eshel Ben Jacob's lecture involved a link between science and art. He described self-organization among bacteria, as evidenced by the beautiful artistic patterns they produce. This lecture had unexpected drama: The computer that was to project the Power Point presentation would not function and Professor Ben Jacob finally decided not to wait for its repair, placed one slide that he had prepared in an overhead projector and improvised a beautifully clear presentation around the single slide, which may even have proved more effective than his original carefully prepared lecture.

An interesting insight into the relationship of art and culture was provided on the last day. In the morning, Indian physicist C.S. Unnikrishnan spoke of his theory of "cosmic gravity," that is, the effect of all masses on the universe on each. The lecture was geared to the layman, but evidently held detailed research behind it. Professor Unnikrishnan prefaced his lecture with talk about his own background and the spiritual motivation

behind his scientific career. Two lectures later in the day were by Western artists. Philippe Boissonnet of Montreal described his work with holograms. The lecture and pictures were interesting, but it would have been nice to see the holograms themselves! Roy Ascott, a British artist with an impressive record of academic positions who has spent years of work on digital art, spoke of the new vistas opening up to the artist, inspired by biophysics and biophotonics.

In the two days preceding the event, there had been several comments about the opposition or dichotomy of art and science. These lectures seemed to contradict that. I doubt very strongly whether Western scientists would have prefaced a description of their work with talk about their spiritual motivations, and yet

clearly there is spiritual motivation behind any such work. Similarly the Western background of the two artists probably contributed to the clearly articulated conceptual framework and methodology they described; yet surely few artists of any culture create without a conceptual framework and methodology. One could see that, in fact, art and science are not inherently different activities but that the cultural background of the speaker influences the way he describes his work to others.

Many of the participants seemed to find new food for thought in the meeting with people of such different backgrounds and fields. Artists don't usually attend conferences together with scientists; Moslems don't often talk about the Qur'an with Jews. There was much private discussion of the various issues. One long discussion centered around the very word "spirituality." Westerners, particularly scientists, rear back at such a term. Yet it is obviously meaningful and it became interesting to consider what, in fact, it means to different people. The discussion lasted till the small hours of the morning, and it seemed many more hours would have been necessary in order to reach a definite conclusion.

I asked my Israeli companions their impressions of the conference and the festival. All agreed that a major part of the experience was the variety of people and world views we met. This multiplicity of cultures and religions were reflected in the city of Melilla, with its multicultural harmony, and lent significance to the choice of this particular venue for the conference. Eshel Ben Jacob pointed out that in most scientific conferences the audience significantly outnumber the lecturers: Each session includes a few presentations before the public, followed by questions. In this case the participants of the conference were themselves the audience and in many cases they were not from the same field as the lecturer. This situation provided an opportunity for widening horizons and for more immediate discussion than is usual in more formal public situations. It was thus possible to create a much stronger relationship between the various participants. In addition, the formal structure of the conference included much time together aside from the lecture sessions. The informal discussions at the two-hour mealtimes customary in that country provided a rare chance to get to know each other.

The material presented at the conference was interesting and valuable, enabling a profound examination of values, of the relationship of art and science, of the concept of the spirit, and of man's place in the cosmos. But the most valuable and unusual aspect for all the participants, I think, was the opportunity to form relationships of friendship and respect with

people from significantly different backgrounds and thus gain
some insight into extremely foreign worldviews. It must be
stressed that this is just the beginning: this first Melilla
conference has shown that such a meeting of different and even
conflicting elements can succeed, and it seems of great
importance to continue such events on an annual basis.

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HOWARD ZINN: YOU CAN'T BE NEUTRAL ON A MOVING TRAIN

by Deb Ellis and Denis Mueller, Icarus / First Run Films,
Brooklyn, NY, 2004. 16 mm, 78 minutes, color; English language,
documentary. Sale: $398.00; Rental: $125.00. Distributor's
Website: http://www.frif.com.

Reviewed by Amy Ione
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After watching the Democratic convention on C-SPAN, I slipped
the video biography of author Howard Zinn, *You Can't Be Neutral
on a Moving Train*, into my video player, wondering how it would
look after a four day-infomercial presented by the American
Democratic party. Like most people who are worried about U.S.
politics today, I know Zinn's reputation as an activist/scholar.
I also remembered that as a young college student, years before
the release of his popular *A People's History of the United
States*, I read his work when I had been drawn to take courses
on topics strange to my life today, ranging from constitutional
history to labor law. Having long ago put these subjects aside,
I still retain some sense that we can never separate our lives
from politics. This idea has become particularly pronounced in
recent years, which unfortunately too often brings to mind the
old saying, "If you're not upset by the current state of
affairs, you're not paying attention."

You Can't Be Neutral on a Moving Train can only be described
as a wonderful movie for our time and a superb biography. On a
basic level, Deb Ellis and Denis Mueller document the life and
times of this historian, activist and author. What sets the
production off is the way they weave contemporary and rare
archival materials together, interspersing interviews with
Howard Zinn and the many who have worked with him over the
years. Testimonials from his colleagues and friends (including
Noam Chomsky, Marian Wright Edelman, Daniel Ellsberg, Tom Hayden
and Alice Walker) enhance the video greatly. Even more
enlightening was seeing most of the characters in both their
contemporary and historical personae. Juxtaposing the events
that forged each of these individuals with Zinn's influence and
his deeply felt commitment to activism left me with a sense that
many of us understand what is to be gained by speaking out
against draconian measures and injustice.

In Zinn's case, it is remarkable the way his story itself makes
his many achievements so striking. In his early childhood, Zinn
lived in the slums of New York City, often in cold-water flats.
After high school, before World War II, he worked in the
shipyards and organized workers. Enlisting in the Air Force in
World War II, he became a bomber. One understands how Howard
Zinn metamorphosed when he recalls how the bombs he dropped were
a factor in his developing his later instincts for peace. Even
more striking were the segments on his time at Spelman College

during the early Civil Rights movement. One of two white professors at this black college in Atlanta, Georgia, Zinn encouraged activism among his students; he was eventually fired for doing so. His time at Boston University is better known. Here, he led students in protesting the Vietnam War, as he continues to lead them still. Although is not possible to detail all of the areas he has touched in his full life, another indication of his reach was his peace mission to Vietnam during that war, where he negotiated the return of American servicemen from the North Vietnamese.

Anyone with an interest in politics will find this video stimulating. Watching the tape right after the convention in Boston made it difficult to separate Zinn's style of patriotism from American history, particularly since the convention was in Boston, where much of *You Can't Be Neutral on a Moving Train* was shot. The shrewd editing further encouraged me as a viewer to think about history. Watching its artistry, I found myself looking at the various protest sequences and thinking of how art speaks about war in its own fashion. Admiring the knack of the directors to join the current debates about Iraq with the legacy of Vietnam brought to mind Paul Revere, hero of the American Revolutionary War. Today, he is famous for his midnight ride, when it is said that he rode to Lexington to warn the insurgents that the British were approaching as well as his work as silversmith and a printmaker. But it is less well-known that his anti-British engravings (e.g. *The Boston Massacre*, which he engraved in 1770) were effective propaganda for the revolutionary cause during his life. Now, they serve to remind us of the degree to which art and politics can successfully

merge.

Zinn's commitment likewise speaks of the degree to which following through on one's beliefs can make a difference. At 81, he is still vigorous and speaking out. Those who have not followed Zinn's career will find that the video lays out his long activist history and encourages the viewer to respond in kind. Winner of the Audience Award for Best Documentary at the Provincetown International Film Festival speaks to its appeal, which I would second. Indeed, it is a film worth seeing. A short trailer is available at http://www.firstrunfeatures.com/howardzinn.html. Also at this site is a list of upcoming play dates in the Unites States and Canada.

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Performance. This category includes works which span a range of practices, which challenge the way performance has heretofore been defined and examines the ways in which new technologies have opened up the meaning and practice of performance. We expect that performance includes a live component, be it on line, in an interactive installation, or on stage.

LEA encourages international artists / academics / researchers / students to submit their proposals for consideration. We particularly encourage young authors and contributors from outside North America and Europe to send proposals for articles/gallery/artists statements (if applicable).

Expressions of interest and outline should include:
- A brief description of proposed text (300 words)
- A brief author biography
- Any related URLs
- Contact details

In the subject heading of the email message, please use "Name of Artist/Project Title: LEA MultiMedia Performance - Date Submitted". Please cut and paste all text into body of email (without attachments).

Deadline for expressions of interest: 10 December 2004

Deadline for proposals: 15 February 2005

Please send proposals or queries to:
Annette Barbier, Craig Harris and Marla Schweppe
mmedia [@] astn [dot] net

and
Nisar Keshvani
LEA Editor-in-Chief
lea [@] mitpress [dot] mit [dot] edu
http://lea.mit.edu

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LEA Special Issue cfp: Geography of Pain
Guest Editors: Tom Ettinger and Diane Gromala
pain [@] astn [dot] net
http://mitpress2.mit.edu/e-journals/LEA/LEA2004/authors.htm#pain

As part of Leonardo's ongoing Art and Biology project, the Leonardo Electronic Almanac (ISSN No: 1071-4391) is seeking short texts (with imagery and project URLs) by artists and scientists, or artist/scientist teams, whose work addresses pain in all its forms. Projects of interest include aesthetic works that address subjective experiences, social conditions, and cultural constructions of pain. Projects on the art of healing are of interest as well, especially multidisciplinary approaches that integrate Eastern and Western traditions. We will also consider current health science, computer science, and engineering research relevant to these topics.

LEA encourages international artists / academics / researchers / students to submit their proposals for consideration. We particularly encourage authors outside North America and Europe to send proposals for articles/gallery/artists statements.

Interested authors should send:

- A brief description of proposed text (100 - 300 words)
- A brief author biography
- Any related URLs
- Contact details

In the subject heading of the email message, please use "Name of Artist/Project Title: LEA Geography of Pain - Date Submitted". Please cut and paste all text into body of email

(without attachments).

Deadline for proposals: 15 October 2004

Please send proposals or queries to:
Tom Ettinger and Diane Gromala
pain [@] astn [dot] net

and
Nisar Keshvani
LEA Editor-in-Chief
lea [@] mitpress [dot] mit [dot] edu
http://lea.mit.edu

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LEA Gallery Special: Global Crossings (GX) Online Exhibition
Guest Curators: Dennis Summers and Choy Kok Kee
gxgallery [@] astn [dot] net
http://mitpress2.mit.edu/e-journals/LEA/LEA2004/authors.htm#gx

The Leonardo Electronic Almanac Gallery (http://mitpress2.mit.edu/e-journals/LEA/LEA2004/gallery.htm) is inviting submissions in conjunction with the Leonardo Global Crossings Initiative. The Gallery is looking to make visible the work of international artists, professionals and scholars who live and work in a wide variety of situations where access to established venues for exhibition, display and publication is limited. Difficulty of access may be attributed to cultural, geographic, ethnic, institutional or disciplinary diversity, or issues related to the North/South divide, age, gender, etc. Through this Gallery we seek to showcase little-known work in the art-science-technology field and to counter the natural tendency of networks to be inward looking, thus reinforcing established points of view.

We are looking for work that considers the global earth in some fashion or another. It can be work that addresses global social, political economic, spiritual, etc. issues. It can be work that physically or metaphorically lies in multiple locations on the planet, it can be work that may have personal relationships to multiple locations on the planet. Or anything else that loosely falls along the concept of being "global" in nature.

LEA encourages international artists / academics / researchers / students to submit their proposal and explore global crossings in an open context in their creative submissions and work. We particularly encourage young authors outside North America and Europe to send proposals.

Submission Procedure

Interested artists should send:

- A brief description of proposed text (100 - 300 words)
- A brief author biography
- Any related URLs
- Contact details

In the subject heading of the email message, please use "Name of Artist/Project Title: LEA Global Crossings - Date Submitted". Please cut and paste all text into body of email (without attachments).

Deadline for submissions: 15 November 2004 *** EXTENDED DEADLINE ***

Please send proposals or queries to:
Dennis Summers/Choy Kok Kee
gxgallery [@] astn [dot] net

and
Nisar Keshvani
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lea [@] mitpress [dot] mit [dot] edu
http://lea.mit.edu

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Leonardo Abstracts Service - Call for Submissions

As part of the Leonardo Educators Initiative, the Leonardo Abstracts Service (LABS) is pleased to announce its first cycle of shortlisted peer reviewed abstracts. Scholars published in the first cycle in the Leonardo Electronic Almanac October 2004 are:

* Peter Anders: A Procedural Model for the Integration of Physical and Cyberspaces in Architecture
Thesis Supervisors: Roy Ascott, Michael Phillips, Michael Punt

* Principles of Metadesign: Processes and Levels of Co-Creation in the New Design Space by Elisa Giaccardi
Thesis Supervisor: Roy Ascott

* Fatima Lasay: Phase Space Portraits of the Nuestra Señora delos Dolores of Baclayon
Thesis Supervisor: Santiago Albano Pilar

* Maureen A. Nappi: Language, Memory and Volition: Toward an Aesthetics of Computer Arts
Thesis Supervisors: Benjamin Binstock and Judith R. Weissman

LABS is seeking PhD, Masters and MFA thesis abstracts for its next publication cycle. Authors of theses interested in having their thesis abstract considered for publication should fill out the Thesis Abstract Submittal form at http://leonardolabs.pomona.edu

Deadline for submission is: 15 November 2004

What is LABS?
LABS is a comprehensive database of Ph.D., Masters and MFA thesis abstracts 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, which in some way investigate philosophical, historical, or critical applications of science or technology to the arts, are invited to submit an abstract of their thesis for publication consideration in this database.

The LABS project does not seek to duplicate existing thesis databases but rather to give visibility to interdisciplinary work that is often hard to retrieve from existing databases. The abstracts are available online at Pomona College, Claremont, California, so that interested persons can access them at no cost.

The English language peer review panel for 2004/2005 are Pau Alsina, Jody Berland, Sean Cubitt, Frieder Nake, Sheila Pinkel and Stephen Petersen.

What is the Leonardo International Academic Community?
The Leonardo International Academic Community is a mailing list to encourage discussion and exchange of ideas (to join email: lea [@] mitpress [dot] mit [dot] edu with a brief introduction) amongst leaders and thinkers in academia. Academics also receive the Leonardo International Faculty Alerts - announcing job and other opportunities in the field.

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For over a decade, Leonardo Electronic Almanac (ISSN No: 1071-4391) has thrived as an international peer reviewed electronic journal and web archive covering the interaction of the arts, sciences, and technology. LEA emphasizes rapid publication of recent work and critical discussion on topics of current excitement. Many contributors are younger scholars and artists.

Contents include Texts; Artists using new media; Feature Articles comprised of theoretical and technical perspectives; the LEA Gallery exhibiting new media artwork by international artists; Leonardo Reviews, edited by Michael Punt, Leonardo Research Abstracts of recent Ph.D. and Masters theses, curated Galleries of current new media artwork by international artists, and Special Issues on topics ranging from New Media Poetry, to Zero Gravity Art, to the History of New Media.

The Leonardo Electronic Almanac (LEA) is jointly produced by Leonardo, the International Society for the Arts, Sciences and Technology (ISAST) and distributed by MIT Press.

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