

2ND. INTERNATIONAL CAIA RESEARCH CONFERENCE

CONSCIOUSNESS REFRAMED

art and consciousness in the post-biological era

19 - 23 August 1998

Centre for Advanced Inquiry in the Interactive Arts
University of Wales College, Newport

PANEL

Title: HYBRID CONSCIOUSNESS: BETWEEN REALITY & VIRTUALITY

General Topic -----

The new liminal condition between reality and virtuality, materiality and information, analog and digital media has unforeseen potential for human consciousness in general and design (i.e., the conceptualization and formalization of any environment) in particular.

The panel will present both theoretical and design work manifesting the rising hybrid condition. We will look at how technology and representation, media and material space, thought and perception, and art and consciousness come together.

Presentations -----

Please, refer to submitted abstracts (at the bottom of this proposal)

Session Format -----

The first part of the Session will be composed of 20 minute presentations by each of the 3 participants (demanding approximately 60 minutes). The second part will be a 30 minute open discussion with the audience.

Panelists -----

Peter Anders

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Peter is an architect and has done extensive research in the use of spatial metaphors on the Internet and their potential effect on the built environment. He has presented his work at Cyberconf, ACM Multimedia, ACADIA, ISEA and other conferences. He is currently writing a book for McGraw Hill entitled "Envisioning Cyberspace", an exploration of work being done in this area.

Julio Bermudez, PhD (PANEL DIRECTOR/MODERATOR)

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Julio has been investigating the interface between digital representation and architecture for over 7 years. His work covers the study of virtuality as a new environment suitable for architectural design and the relationship between analog and digital media. He has presented and published work on this area at over 20 national and international forums.

Dace Campbell

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Dace works at the prestigious University of Washington HIT Lab researching the integration of virtual interface technology with architecture, and at NBBJ (architecture office) applying that research in a professional setting. Dace's work on virtuality and architecture has been published in almost all American architectural magazines (Architecture, Architectural Record, Progressive Architecture, etc.).

NOTE: All the panelists have been working in the area of virtuality/cyberspace for at least 5 years. A 4th panelist could be included depending on the allocated time per panel session. If so, we would like to have somebody from Europe to bring another perspective into our discussion.

Technical Support -----

Running this panel will ideally require 2 slide projectors, a VHS video (accepting NTSC format) and computer screen projection system, a sound system (in combination with video/computer), and a good PC/Macintosh computer with a Zip drive (for file loading purposes).

Declaration -----

The three individuals submitting this Panel proposal, namely Peter Anders, Julio Bermudez & Dace Campbell have the serious intention to attend the conference.

ABSTRACT (1)

CYBRIDS: SPATIALIZATION OF THE WEB AND ITS IMPLICATIONS FOR SOCIAL ENVIRONMENTS

Peter Anders
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United States

Cyberspace is usually discussed with an accent on the cyber . The space suffix is a tag-on. For many cyberspace connotes a media stratum shared by computer users - no different from telephonic or data communication.

But the spatial metaphor offers more than that. In an age where information overwhelms our senses, the spatial medium is a potent ally. As the computer is an extension of the mind, cyberspace can extend our cognitive space.

SPACE IS A MEDIUM.

It is an illusion created by the mind to manage huge amounts of information. The space we take for granted is built by us from the moment of birth, later influencing it with language and culture. Our experiential space is one with our internal cognitive space. It is what we experience, what we imagine or remember . It is the symbolic space through which we communicate with ourselves and others. Our minds both create and consume this spatial image.

A cognitive understanding of space, however, blurs distinctions between the physical world and our mental experience of it. Specifically, if a simulation of space is experienced as "real", it becomes autonomous - uncoupled from the physical. This will have consequences in materially oriented professions. Among them is architecture.

Over the past few years students at the New Jersey Institute of Technology and at the University of Michigan have studied spatial structures on the Internet. These structures, Multi-User Domains (MUDs), are social environments which use the spatial metaphor to emulate a community within a setting. The setting is like a stage prepared for the unfolding on-line dramas of the MUD. The structure is most often unseen, since MUDs are largely text-based environments.

The research has been conducted in architectural design studios augmented with computers and carried out in a rigorous fashion. The students, in teams , were asked to become

citizens of their selected MUDs and to explore the spatial metaphors provided by the text. This information was incorporated into a 3D logical adjacency model (LAM) of the MUD.

These objects, perhaps the first spatial documents of the MUDs, form a schematic diagram of relationships between the domains' spaces. The final results were surprising in their complexity. Each domain had its signature structure despite similarities in their operation and underlying code.

The study conducted at the University of Michigan has explored the ambiguity between actual physical spaces and the extended cognitive spaces of the MUDs. Students were asked to examine MUDs at the same time they analyzed existing buildings on campus. They were required to study the ambiguities between cyber and physical presence. Finally they reworked the program for the existing building in order to benefit from on-line spatial structures. This included examining the comparative advantages of this approach to design. Their final projects explored hybrids of cyberreal and physical buildings - cybrids.

ABSTRACT (2)

BETWEEN REALITY & VIRTUALITY: TOWARD A NEW CONSCIOUSNESS?

Julio Bermudez, PhD
Graduate School of Architecture
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"...outer world and inner world are interdependent at every moment. We are simply the locus of their collision: two worlds, with mutually contradictory laws, or laws that seem to us to be so, colliding afresh every second, struggling for peaceful coexistence. And whether we like it or not, our life is what we are able to make of that collision and struggle." (Hughes, 1988, p.42)

THESIS

A close scrutiny of life reveals that living creatures are not truly material entities separated from their surroundings but rather regulatory interfaces of interactions occurring between "their" internal and external environments. Life is an emergent condition whenever and wherever certain complex internal and external tensions meet one another and find some dynamic balance. Life is a "boundary conditions" phenomenon.

To maintain continuity under constantly changing circumstances, life must endlessly (1) monitor the boundary conditions and (2) act towards responding at once to internal and external demands. The resulting motor-sensory activity generates a certain *experiential field, life space* (Lewin), or *'ambiance'* (Von Uexkül) that an organism is aware of. Awareness is thus a motor-sensory function presenting a *synthetic* 'report' of boundary conditions. *Awareness happens neither 'inside' nor 'outside' an individual but instead in the threshold between the two, at their interface.*

Awareness works very well under close-to-equilibrium boundary conditions, that is when environmental pressures from either side follow patterns that have been previously experienced (historically consistent). When boundary conditions go beyond these prescribed or expected patterns awareness becomes increasingly ineffective and consciousness takes precedent. In effect, consciousness is automatically unleashed whenever we face a surprising outcome that contradicts or happily extends our habitual expectations. In other words, whenever awareness is transcended consciousness is called in to deal with the situation.¹ It is not surprising that thinking (as much an offspring as a parent of consciousness) and higher learning also come out of far-from-equilibrium boundary conditions (i.e., frictional interfaces between inner and outer environments). Hence the starting quote.

QUESTIONS

Although the arts have always provided access to virtual environments (e.g., painting, literature, music, etc.) and conjured up consciousness via aesthetic power, recent technological developments have created unprecedented conditions that may allow us new opportunities. Unlike the past, the new virtuality allows for three-dimensionality, interactivity, immersion and multi-media phenomena (sensorium). This invites us to wonder about the potential new consciousness that may arise from these circumstances. Does the meeting of a largely reality-trained psychology and a completely enveloping and foreign artificiality create new kinds of thought, experience, self, learning? How does the external tension of virtuality affect and demand compensation from internal psychological forces?

DESIGN INVESTIGATION

These questions among others launched a design investigation that uses a digital virtualscape to generate new conscious states. To do this, the design proposal focuses on the 'aural' qualities of the 'virtualscape' itself (Walter Benjamin) and avoids easy semiotic references to the known. The resulting abstract and unfamiliar environment offers one-sided boundary conditions that are at once (a) unbiased (i.e., clean from memory) and (b) as representationally alien (hence novel) as possible.

Practically this means to design space rather than form, the container and not the contained, and the environment and not the 'stuff' within it. By moving from the solid to the void, by making it impossible to focus on one thing the virtualscape directs consciousness toward nowhere except the boundary conditions, that is, toward itself. The result invites emotional, situational and experiential states that are closer to meditation and other non-ordinary states than to daily waking experience. As the design focuses in neither the subject nor the object, the design provides access to a non-dualist mind.

The strong reactions that this work elicits in its audience is a good indication that technology-based virtuality may bring up higher yet different levels of consciousness than those allowed by art in the past. Surprisingly, however, the fluid interfaces framed by the design work are of such peaceful and surrendering quality that reminds us of Zen concepts

¹ The 'transcendence' of awareness by consciousness may be elicited by natural or artificial circumstances. We can be 'pushed' into a conscious mode by a natural event (e.g. social pressure, personal sickness, a threat, etc.) or by artificial means, that is, by intentionally problematizing an otherwise not challenging situation. It is the 'artificial' or purposeful creation of conditions leading to the arousal of consciousness where lies an essential pedagogic secret for all education. We will come back to this point later on this chapter.

such as Shunyata, Samadhi and Mu. In contrast to the 'frictional' metaphor utilized to describe attention rising conditions in the starting quote (and earlier arguments), the designed virtualscape manages to achieve the same end using positive (i.e., effortless, non-struggling) means.

ABSTRACT (3)

VIRTUAL ARCHITECTURE AS HYBRID: CONDITIONS OF VIRTUALITY VS. EXPECTATIONS FROM REALITY

Dace Campbell
Human Interface Technology (HIT) Laboratory
University of Washington
United States

For years, designers and theoreticians have discussed the nature of cyberspace, the collection of spatial, digital environments made possible by "virtual reality" technology and the Internet. The design of such interactive virtual spaces is an artistic, even architectural, issue: these environments are experiential, inhabitable, and serve as an expression of our society every bit as valid as our physically-built environment does. However, many fundamental characteristics of virtual space are quite unlike that of the physical environment: new factors contribute to the shaping of our environment as much as the absence of traditional ones when that environment is virtual rather than physical. Designers of cyberspace, as well its inhabitants, need to understand how and why the characteristics and constraints of the virtual differ from that of the physical, where they are the same, and what implications each has for design.

The expression of virtual architecture falls within a spectrum of design possibilities which ranges from the mimicking the architecture of the physical world at one end to the digital, spatial expression of informational relationships at the other. Human participants in the virtual realm carry psycho-perceptual and socio-cultural preconceptions with them as they strive to interpret and comprehend their digital spatial surroundings. Thus, the success or failure of these post-biological virtual environments depends quite strongly on the human and ultimately biological "baggage" and expectations we bring with us. For example, while the absence of gravity in the virtual may not require the convention of a global up or down, the shared meanings of up and down as organizational and hierarchical standards are ever-present among virtual participants. In effect, comprehensible virtual spaces become hybrids of representing abstract relationships of digital information and the need to satisfy the expectations of participants from a physical world.

These factors which shape the design of virtual architecture are investigated and demonstrated in a specific case study: the design of a virtual gallery. The on-line gallery, intended to archive, organize, and feature dozens of virtual environments created at an interface research laboratory, serves as a test bed of design ideas which express the digital nature of its context. A "walk-through" of the gallery exposes several issues faced during its design. The resolution of these issues, categorized for discussion as orientation, navigation, transition, enclosure, and scale, are contradictory and paradoxical in nature. While these issues, and their resolution, differ in the physical and virtual realms, they are nonetheless just as relevant to elevating our level of consciousness of our digital environment in the post-biological era.