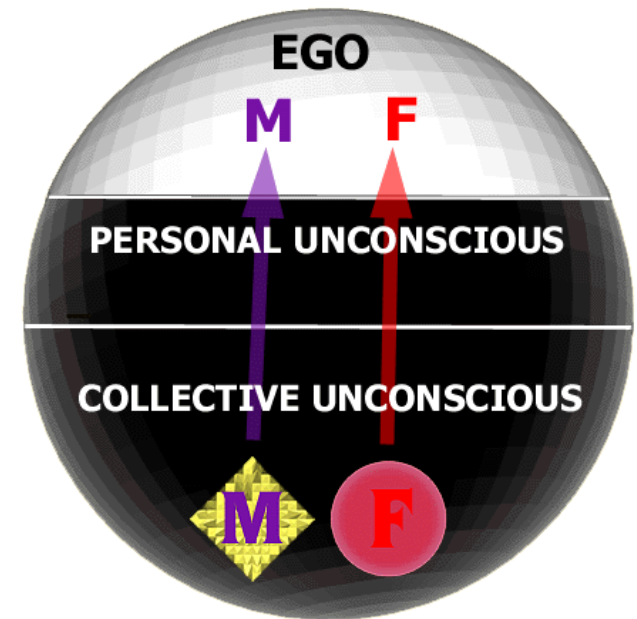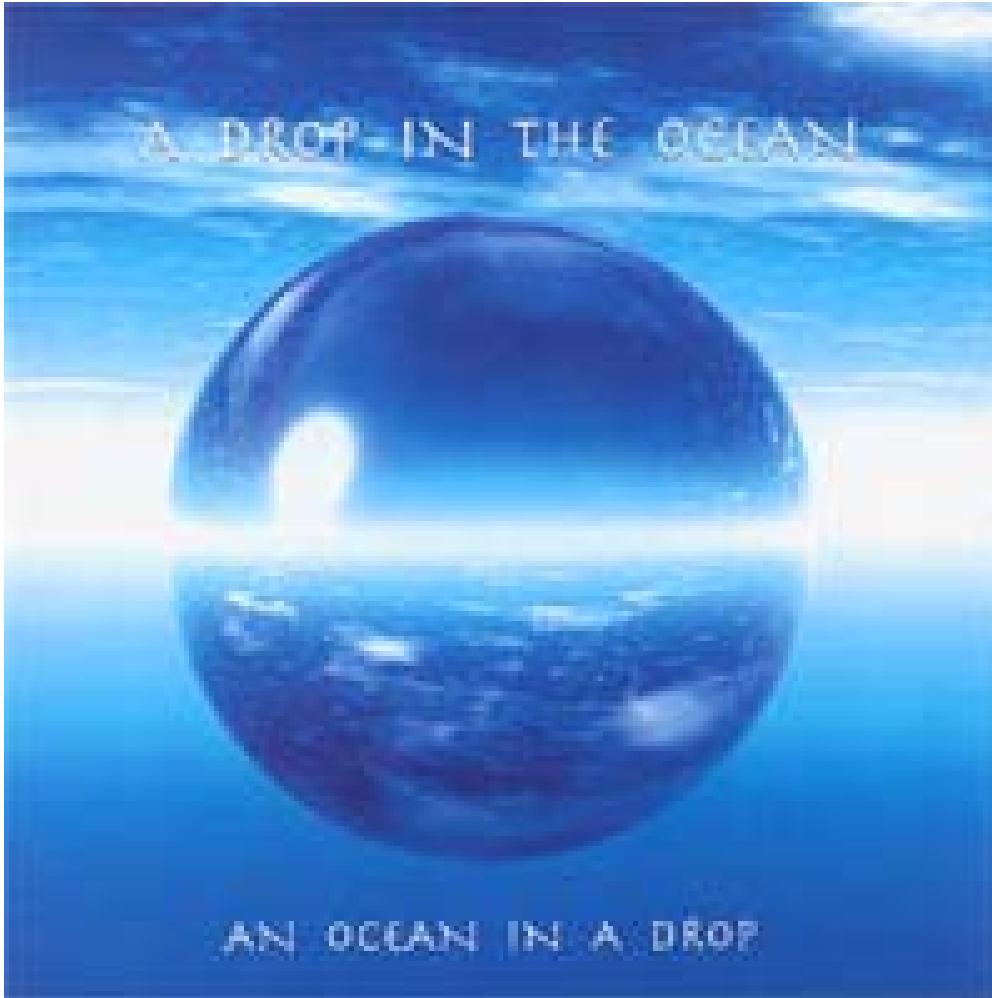# Cultural Computing:
the ALICE project
-- kick off meeting, May 15, 2006 ---

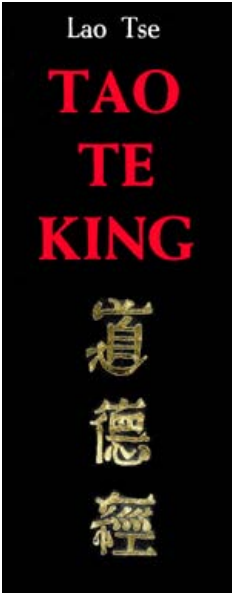## Sponsored by Microsoft Research

Matthias Rauterberg
Eindhoven University of Technology
The Netherlands

Cultural Computing: the collective unconscious [PDF]

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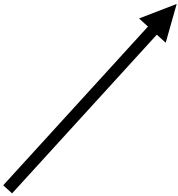# Culture: the East

Lao Tse
TAO TE KING

Lao-Tse
c.604 - c.521 BC

Siddharta Gautama
563 – c.480 BC

Buda

Enlightenment

Zen

Bodhidharma
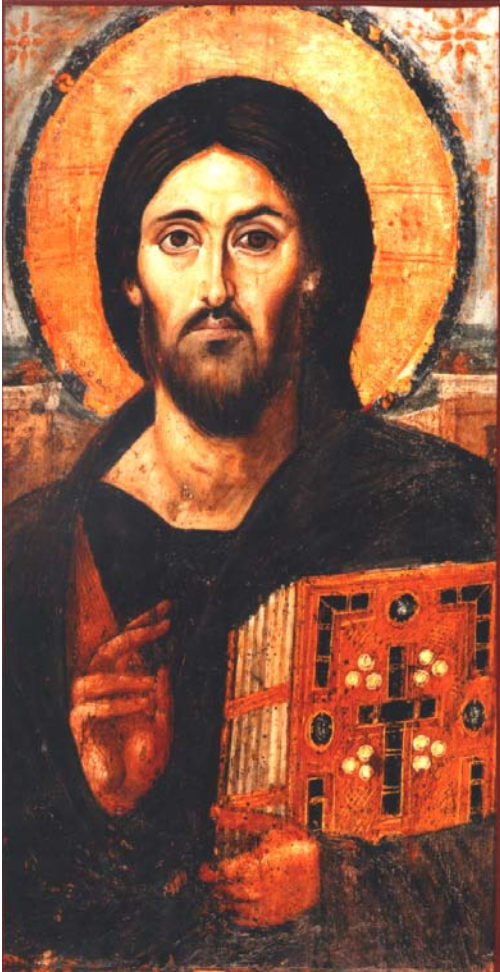**470-543 AC**

ZENetic computer (2003)

Naoko Tosa

松岡正剛
Seigo Matsuoka

Culture: the West

René Descartes
1596-1650

res cogitans - mind

res extensa - body, matter, etc

Immanuel Kant
1724-1804

synthetic
a priori knowledge:

- **time**
- **space**

both *pure forms of intuition*
and *pure intuitions*.

Kant about Enlightenment [PDF]

Culture in the East and West

Cross-cultural psychologist's juxtapose
Eastern *holistic* and Western *analytic* reasoning.

Eastern reasoning embraces contradictions among objects in a yin–yang field of constant change.

Western reasoning tends to focus on objects and categories, and is driven by *formal logic.*

Nisbett RE., Peng K., Choi I. & Norenzayan A. (2001). Culture and Systems of Thought: Holistic versus Analytic Cognition. *Psychological Review*, 108(2), 291-310 . [PDF]

What would be a Western equivalence to ZENetic Computer?

Possible Answer:

- an interactive experience based on the story of **Alice in Wonderland**

**Charles Lutwidge Dodgson
1832-1898**

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Stage-1: in the park
Theme: TIME
Challenge: lure user to the rabbit hole

link to video clip

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Stage-2: down the rabbit hole [pp. 13-14]
Theme: SPACE-environment
Challenge: feeling of free fall

link to video clip

link to video clip

Flow stair lift

Stage-3: in the hall [pp. 14-19]
Theme: SPACE-individual
Challenge: feeling of growing and shrinking

link to video clip

CaveUT

Projected image
Wall
Projector mounted on the wall *sideways*
Ideal viewing location
PC
Net Hub
PC
PC *Operator console*

Figure Two: Schematic of the Minimal UT-Cave
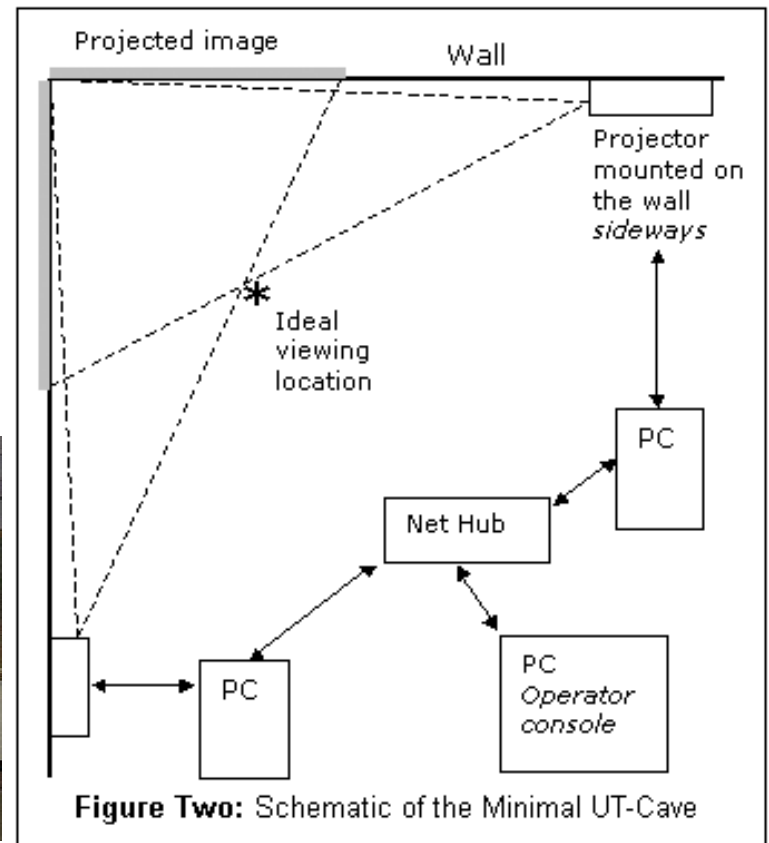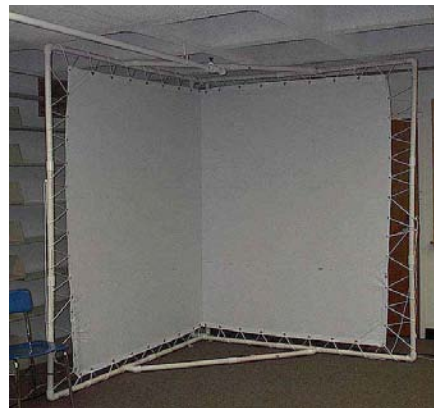
Stage-4: in the pool of tears [pp. 25-27]
Theme: WATER/GENESIS
Challenge: feeling of being in water
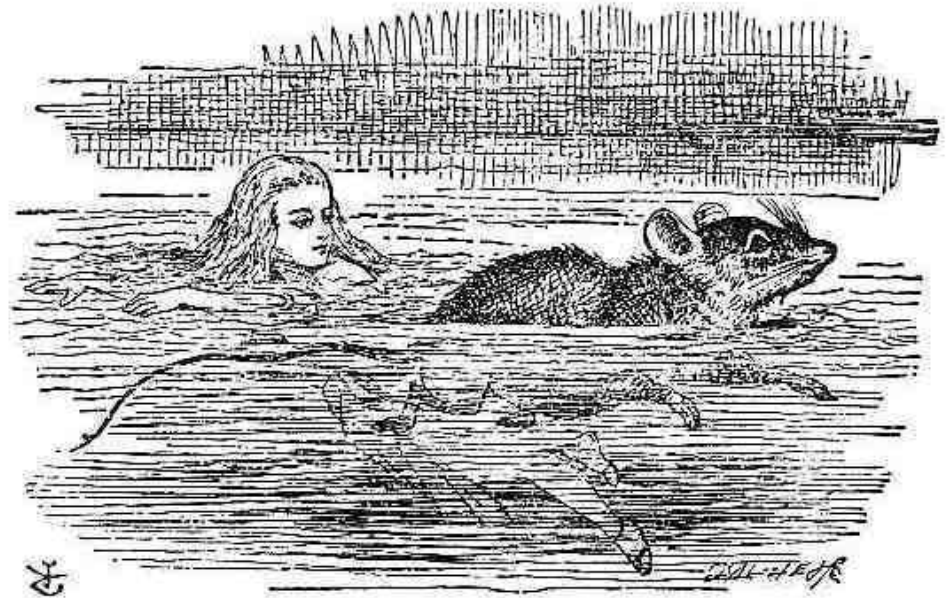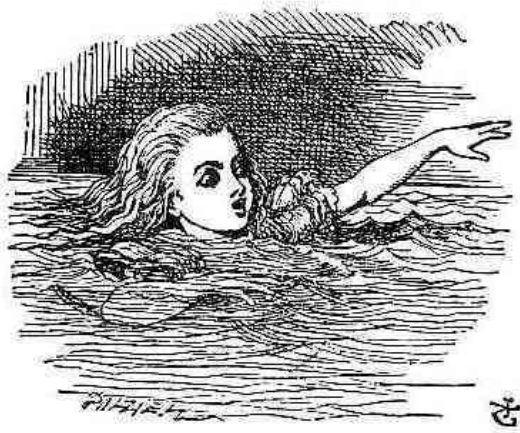
Stage-5: the Caterpillar   [pp. 47-53]
Theme: SELF/EGO
Challenge: ESP based dialogue

Bachelor project

Tijn Kooijmans

Eindhoven University of Technology
The Netherlands

Stage-6: the Cheshire cat [pp. 64-67]
Theme: LOGIC
Challenge: discussion about madness

~have a wonderfully insane weekend~

ELIZA

link to video clip

Alice encounters the Cheshire Cat
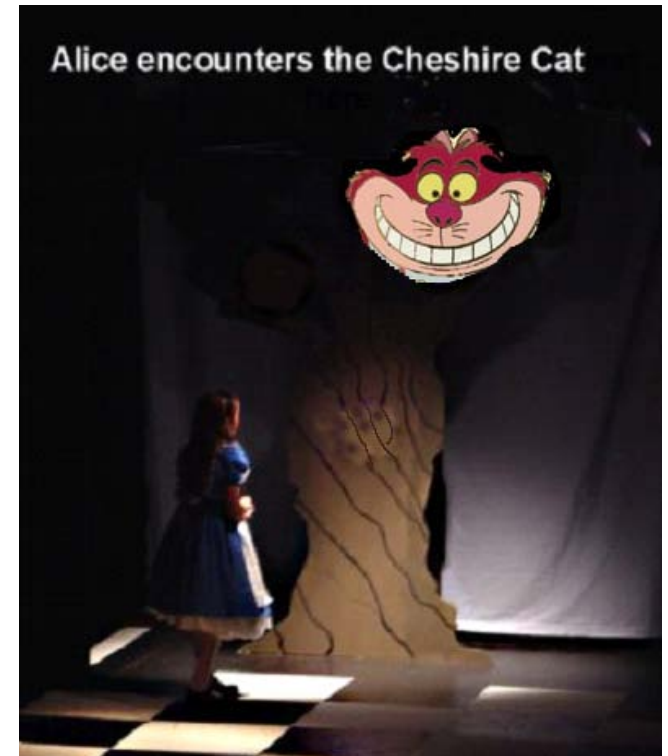
Design Issues for Stage 1-6:

- narrative, story flow
- identification of main character(s)
- entrance and exit conditions
- required technology
- …

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Software/hardware-Architecture

Actuators interface

actuator

sensor

Sensors interface

pre-processor

Experience generator

Narrative & Plot

Translation of user actions
Integration of MR and R platforms
Intermediation between agents
Real-time adaptive narrative and plot
Heuristic interaction

I/O Manager	Rendering Engine
Mixed Reality (MR)	

Agent for avatar control
Scripts for avatar behaviour
Virtual Environment

I/O Manager	Behaviour Engine
Robot (R)	

Agent for robot control
Speech output
High-level robot performance scripts

Software Packages

Autodesk® **3ds Max® 8** software builds on our promise to deliver state-of-the-art tools for creative and media professionals. Developed as a total animation package with a deep, productive feature set designed to accelerate workflow, 3ds Max is the leader in 3D animation for game development, design visualization, visual effects, and education. TU/e-ID site license.

Academy Award® winning **Maya® software** is one of the world's most powerfully integrated 3D modeling, animation, effects, and rendering solution. Maya also adds to the quality and realism of 2D graphics. That's why film and video artists, game developers, visualization professionals, Web and print designers turn to Maya to realize their creative vision. Price ca 7000 EUR

Goblin is an innovative platform for developing 3D augmented and virtual reality applications and games. It is written in C# and uses Managed DirectX. The platform leverages the unique capabilities of the .NET Framework to provide innovative features such as *Edit-and-Continue*. Free download.

link to video clip

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Expected Results:

- A research platform for cultural computing
- A prototype for interactive experiences
- Design guidelines:
  - Kansei mediated interaction
  - Robot behavior scripting

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Let's go and write history!