



International Association for Semiotic Studies (IASS-AIS)
International Semiotics Institute (ISI) | Kaunas University of Technology (KTU)
13th World Congress of Semiotics
Kaunas, Lithuania, 26-30 June 2017

VISUALIZING THE CYBERSEMIOTIC EXPERIENCE

CLAUDIA JACQUES



MFA Computer Art
Film/Video/Photography
Interactive + Technoetic

Elementary School + Montessori
Studio + Design + Digital Art
Communications

Artist Educator

Designer Researcher

Graphic
Web
Interface
Information

Advanced PhD Candidate in
Interdisciplinary Integrative Arts

*Space-Time Aesthetics in the Meta Environment:
A Cybersemiotic Analysis and Case for Knowledge Art*

Claudia Ferreira Jacques de Moraes Cardoso
Dyslexic + ADHD + Hearing Impaired
Brazil + USA





User experience

Design

USER EXPERIENCE versus DESIGN

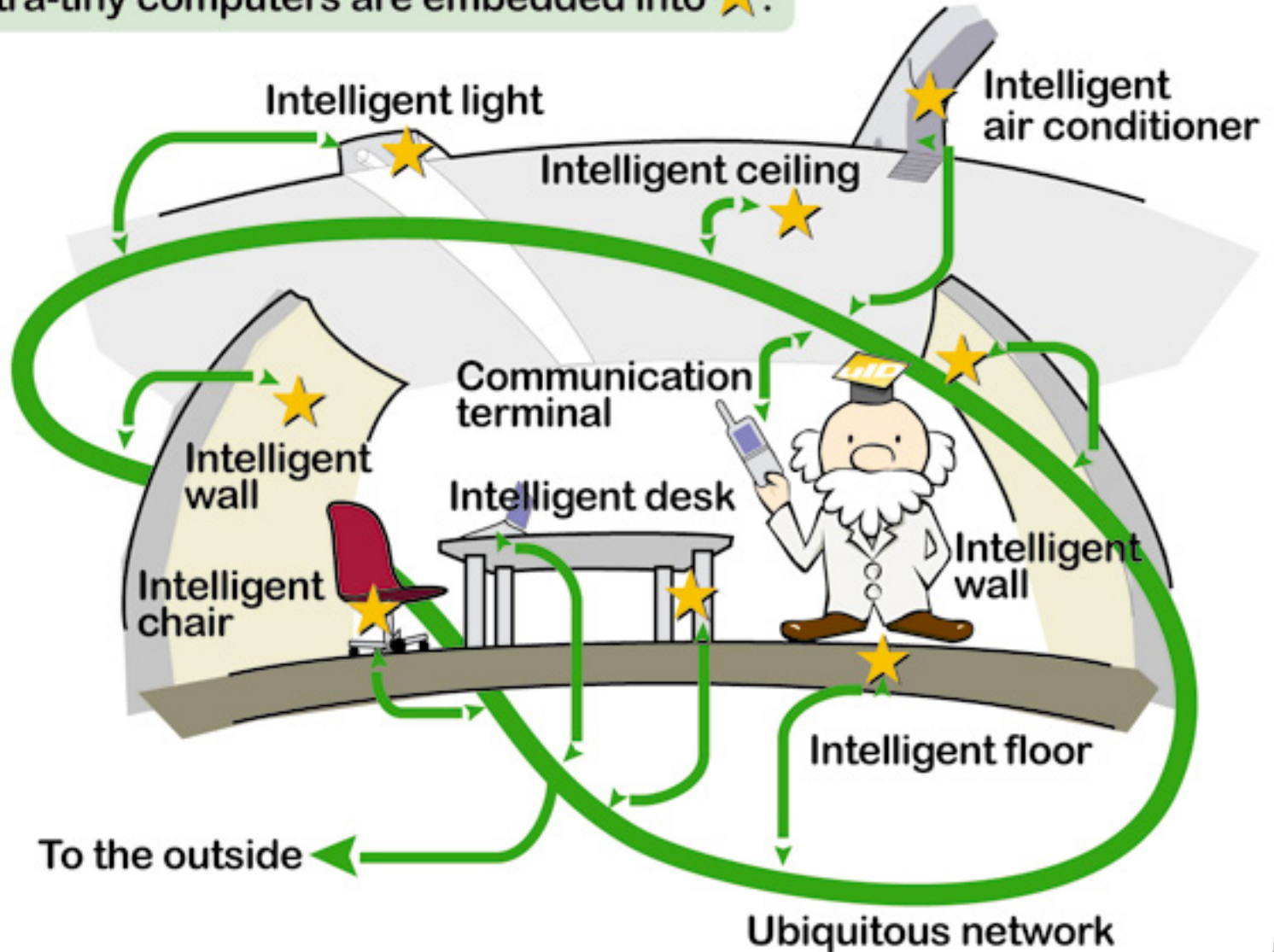




INTERACTIVE ENVIRONMENTS



Ultra-tiny computers are embedded into ★.





Hi Lee,
Michael Lehman from our
Sydney office is working on the
same marketing proposal with
you. It might be helpful to
connect with him when you
have a chance.



Why Art?

- Skills
- Language
- Aesthetics
- Communication
- Self-Expression
- Awareness + Consciousness



Components of Art

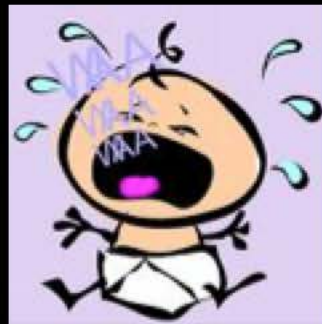
Subject Matter

- The What
- Person
- Thing



Content

- The Why
- Message:
 - Emotional
 - Intellectual
 - Political



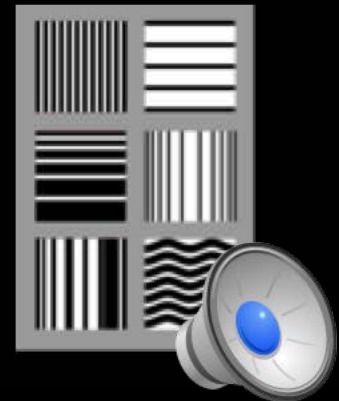
Context

- Background
- Religious
- Culture/Language
- Political
- Environmental



Form

- The How
- Design
 - Elements
 - Principles



THE CYBERSEMIOTIC STAR

LIVING SYSTEMS

EXPERIENTIAL CONSCIOUSNESS

FORM

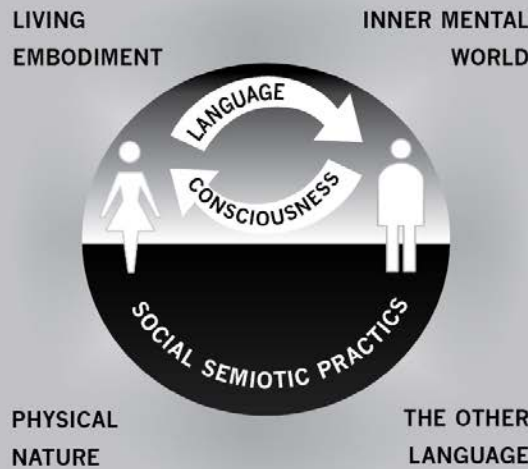
CONTENT

KANTIAN WHOLES
AND AGENCY
(S. KAUFFMAN)

CHOICE BASED
PERSONAL DEVELOPMENT
(MERLEAU-PONTY)

ORGANIC EVOLUTION

EXPERIENTIAL CONSCIOUSNESS



NON-ERGOTIC AND
NON-EQUILIBRIUM
(PRIGOGINE)

ABDUCTIVE AND
LANGUAGE-DRIVEN
KNOWING (POPPER)

BIG BANG COSMOLOGY

HISTORY OF CULTURE

SUBJECT
MATTER

CONTEXT

MATTER/ENERGY

SOCIAL MEANING





The understanding of how the Components of Art work together to help us experience art is an established knowledge. Art historians and art practitioners use these four aspects to analyze and understand artworks but when it comes to understanding our reality, we fragment reality in its different aspects. Mind, body, emotional, intuitive. Our experiences manifest holistically but are cut into different areas/fields which don't necessary share the same concepts, words, meaning...

Claudia Jacques

**Marcel Duchamp, Nude Descending a Staircase,
No. 2, 1912**
Oil on canvas, 58 x 35 in.

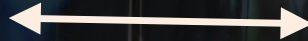
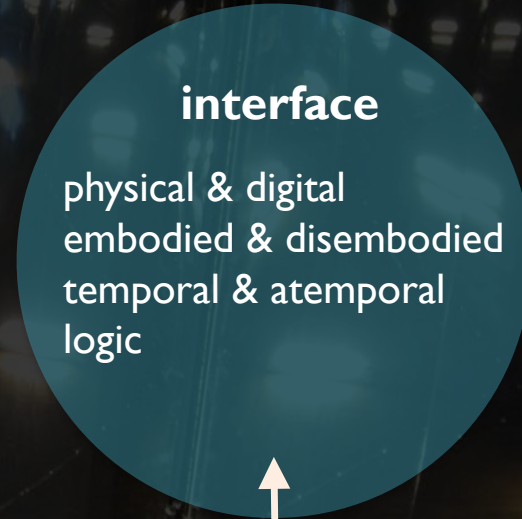
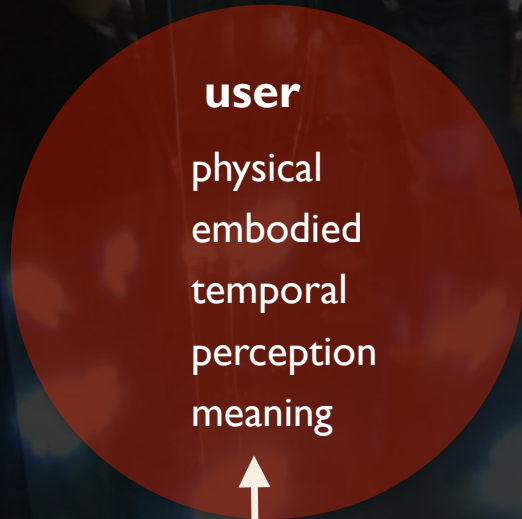


HUMAN PERCEPTION

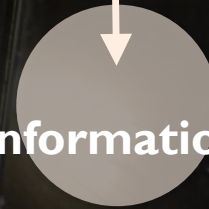
semiotics

COMPUTER INTERFACE PROCESS

cybernetics, information design, digital media



perception
meaning



digital
logic
processes
disembodied
atemporal

USER EXPERIENCE

INTERFACE DESIGN

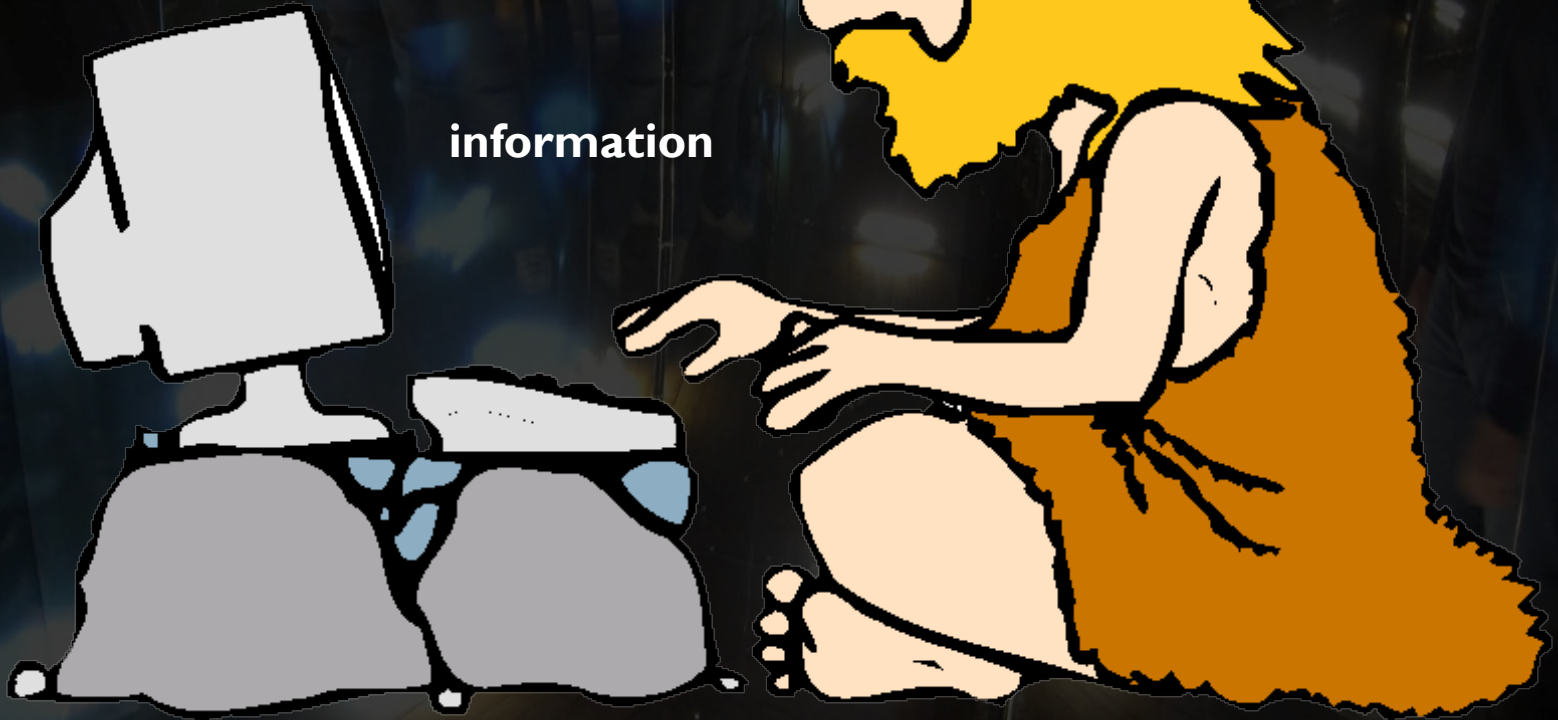
Perception x Process



interface

user

information



Meta-Environment



Human element

“One that uses” something:

- information
- interface

user



- Entropic transmission of data and metadata in binary format that generates communication as a whole.
- Metadata is not only the description of the content but also the description of the structure of the content.
- “*A difference that makes a difference*”
Gregory Bateson's definition of a “bit” or “elementary unit” of information.

information

Weiner, 1948, 1965, p61
Shannon & Weaver, 1959, p100



‘Interface is described in physics as a
“surface separating two phases of matter.”’

Encyclopaedia Britannica

physical machine, hardware

computer, cell phone, tablet, refrigerator, door lock etc.



**software, applications
and processes** utilized by
these machines

Medium – hardware+software – that **facilitates**
the interaction between humans and
information.

interface





user

interface

information

Cybersemiotic
Framework

Meta-Environment



“Cybersemiotics is a **transdisciplinary** theory of **Information, Cognition, Meaning, Communication** and **Consciousness** that integrates **Cybernetics** and **Peircean Semiotic** paradigms in a **common** framework.”

Soren Brier, 2008

Cybersemiotic Framework

user

physical | emotion | meaning

information

digital | logic | meaning

interface

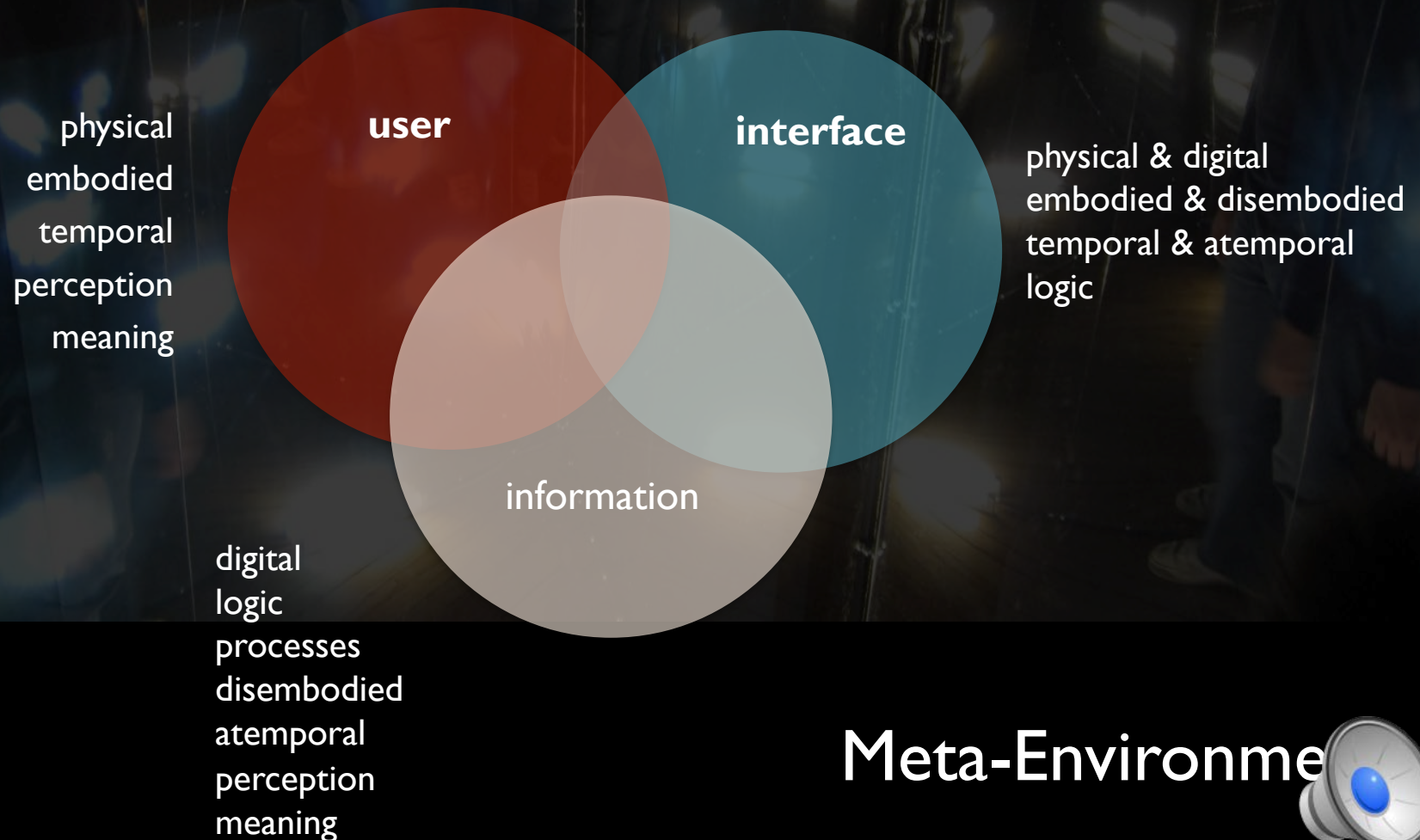
physical | digital | logic

“Information and meaning, logic and emotion
have to be united in new creative ways.” Brier

Meta-Environment



It is also important to consider in this analysis the understanding that the Meta-Environment is here seen as a closed system with three distinctive interactive elements, and individually each element have many distinctive interactive parts. As such, it can be regarded as a Dynamic Complex System where the influence of the individual elements on the system is greater than the sum of these elements (nonlinearity) affecting the system's predicted stability – chaos (Gershenson and Heylighen, 2005.)



Meta-Environment

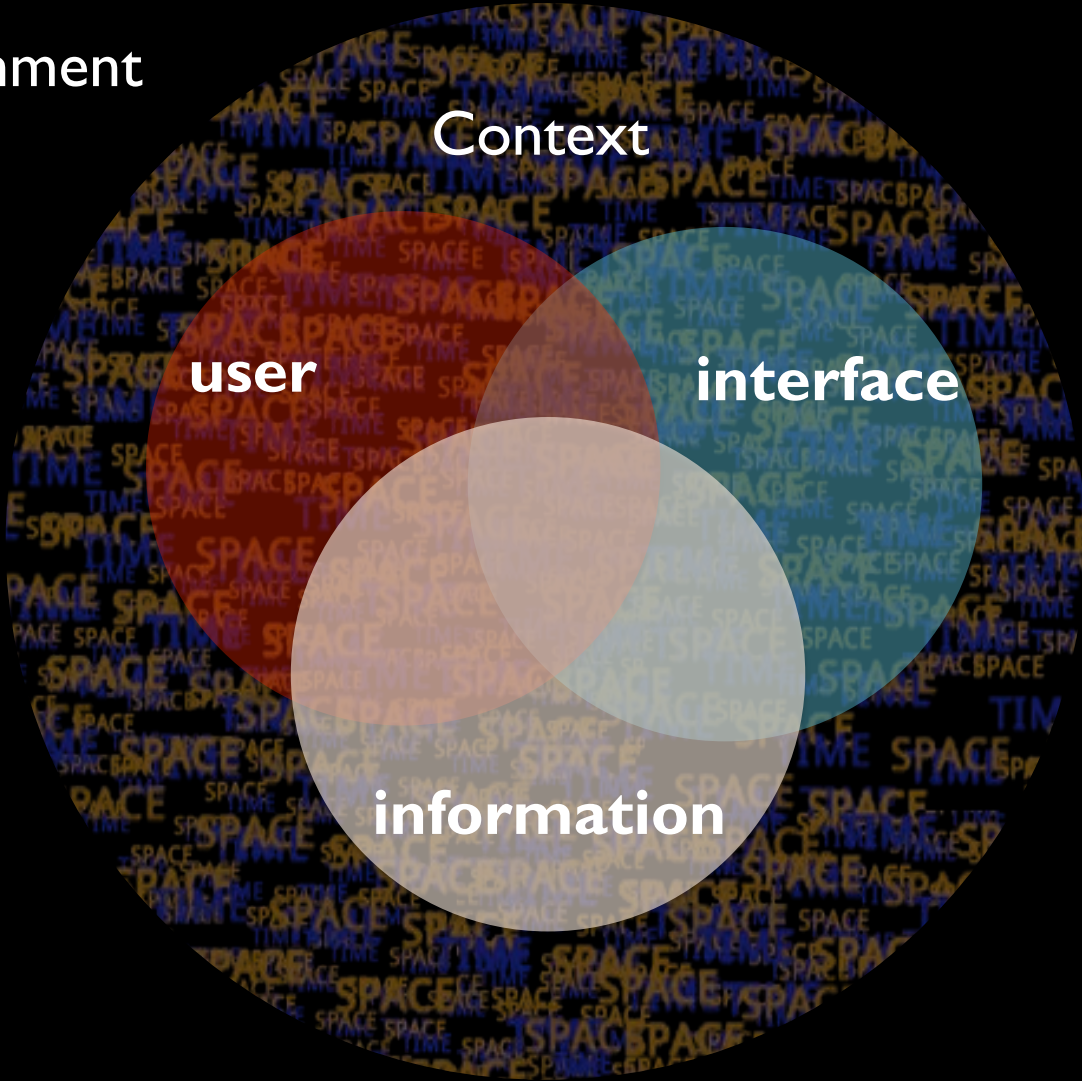
Categories/Elements	User	Information	Interface
Spatiality	Physical	Digital	Physical + Digital
Temporality	Temporal	Atemporal	Temporal + Atemporal
Essence	Atoms	Bits	Atoms + Bits
Sign Processes	Subjective	Objective + Subjective	Objective
Embodied Cognition	Embodied	Disembodied	Embodied+Disembodied¹⁷
Dynamic Complexity	Linear + Nonlinear	Nonlinear	Linear

Table 1

Generative
Dynamic
Complex Adaptive System

The Cybersemiotic
Experience 

Meta-Environment



Generative
Dynamic
Complex Adaptive System

The Cybersemiotic
Experience



Meta-Environment

Context

user

interface

**CYBERSEMIOTIC
EXPERIENCE**

information

Cybersemiotic
Framework

Generative
Dynamic
Complex Adaptive System

The Cybersemiotic
Experience



THE CYBERSEMIOTIC STAR

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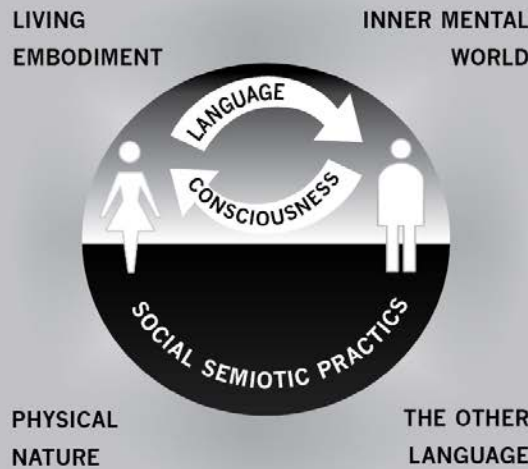
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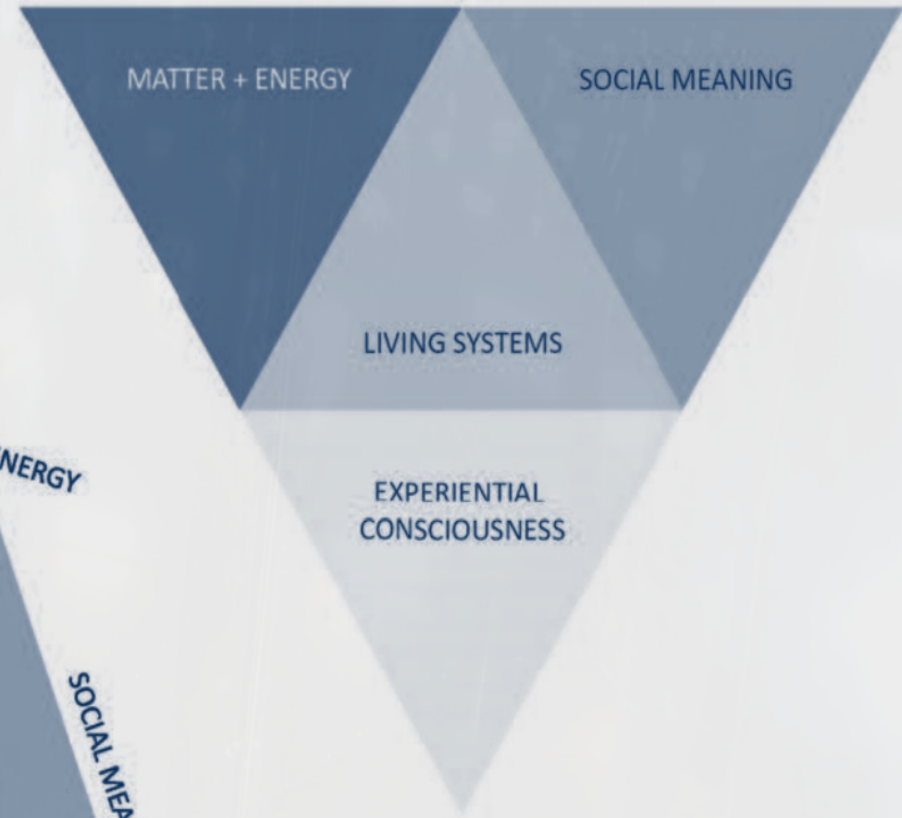


THE CYBERSEMIOTIC EXPERIENCE

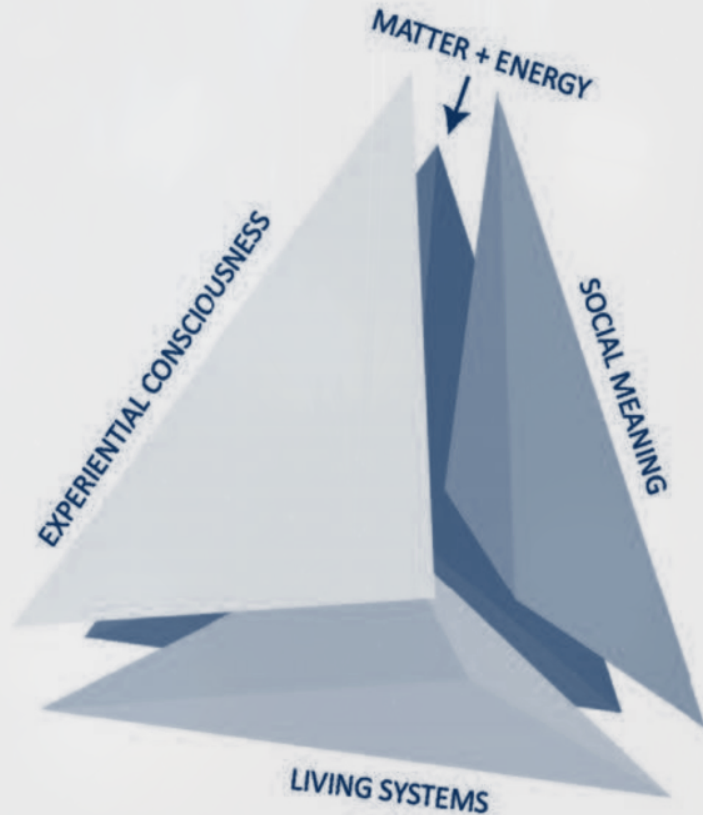
2-DIMENSIONAL REPRESENTATION



OPEN 2-DIMENSIONAL REPRESENTATION

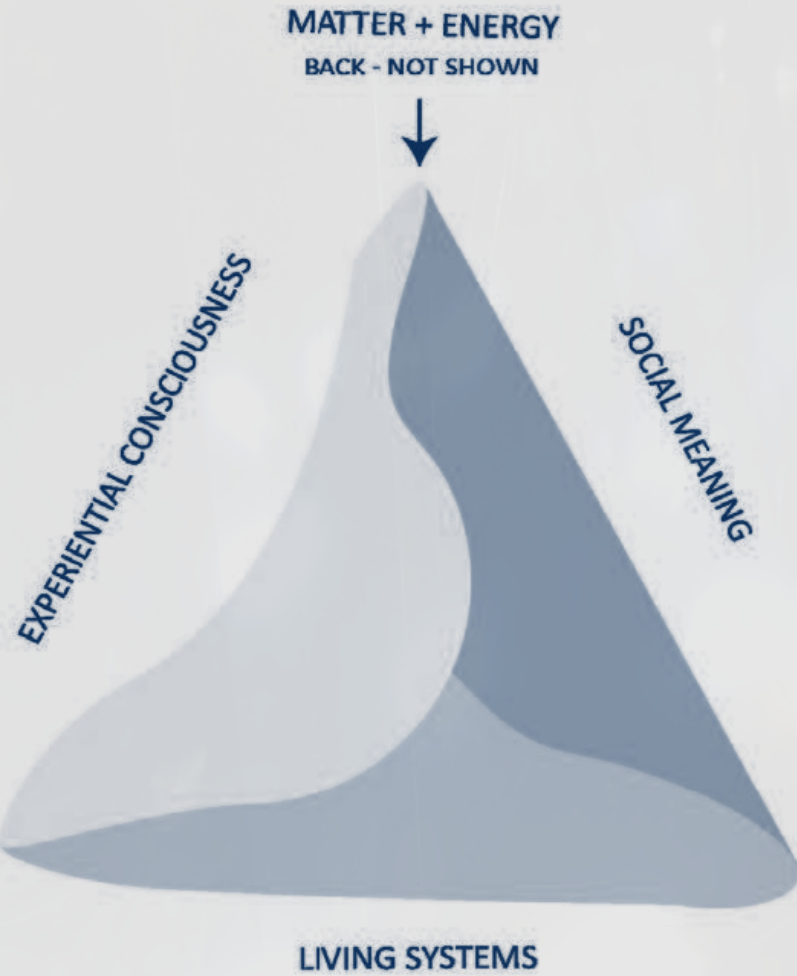


EXTRUDED 3D REPRESENTATION

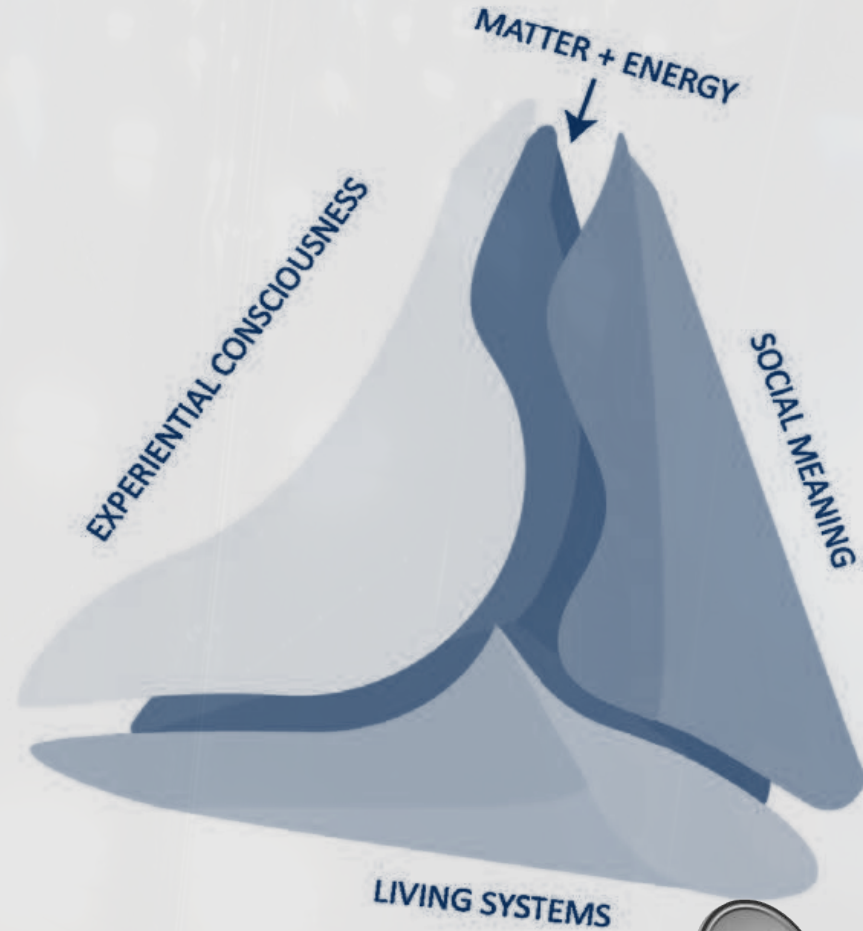


THE CYBERSEMIOTIC EXPERIENCE

REPRESENTATION OF THE ADAPTIVE FACETS OF THE CYBERSEMIOTIC STAR



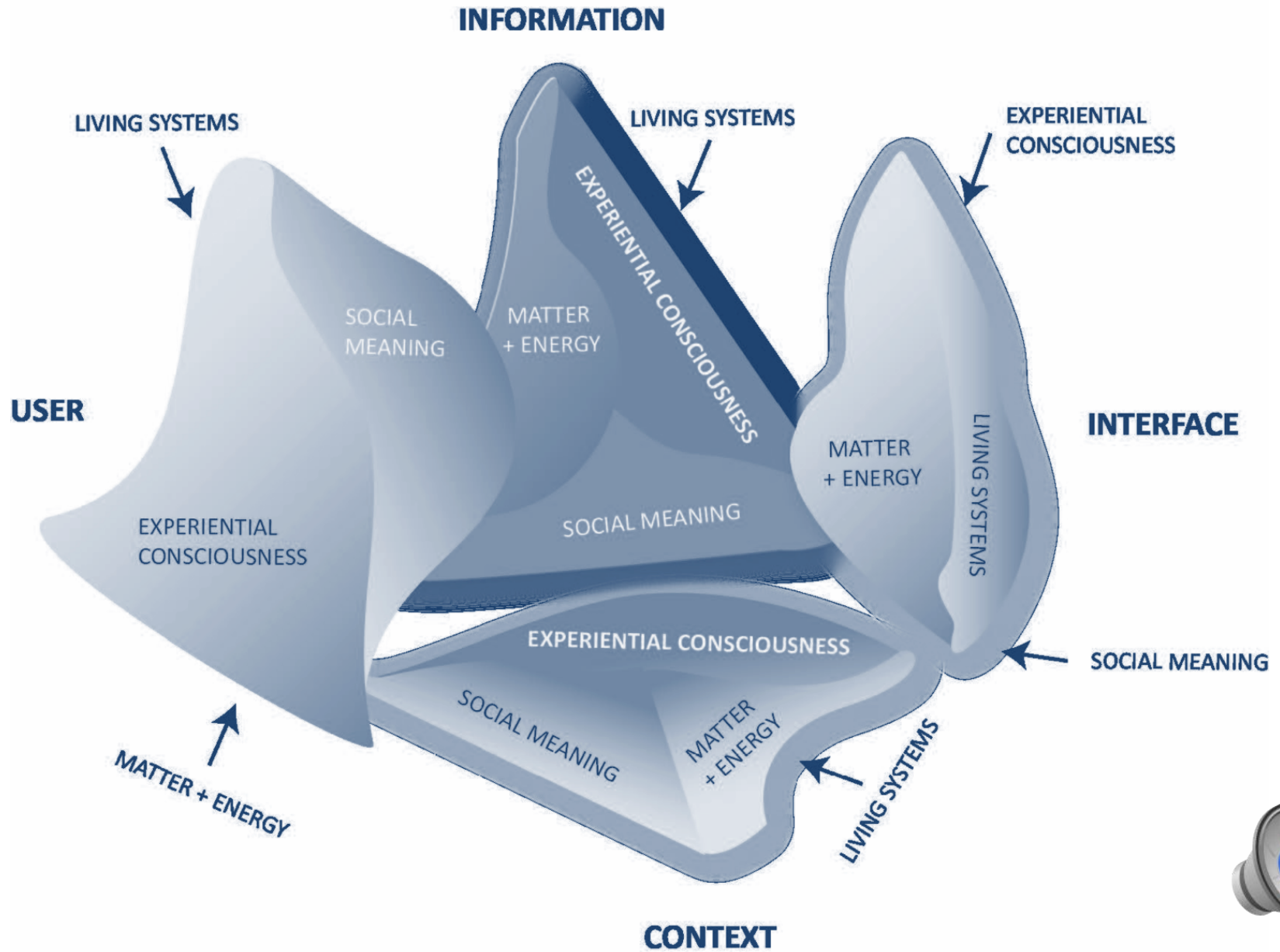
2D REPRESENTATION



EXTRUDED 3D REPRESENTATION



THE CYBERSEMIOTIC EXPERIENCE IN THE META-ENVIRONMENT





Integration: Polyhedron
Generative
Dynamic
Complex Adaptive System

Visualization
Models



Thank you!

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