

The Web and the Future of Language

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Human Language

- Syntax
 - Combinations of elements
 - Multi-leveled articulation
- Semantic
 - Potentially infinite # of distinct representations
 - Hierarchically organized in sets and subsets
- Pragmatic
 - Ability to tie and untie a potentially infinite # of human relationships, using syntax and semantic.
- ==> Reflexive consciousness
- ==> Culture (*human* collective intelligence)

Discursive Thought

Being

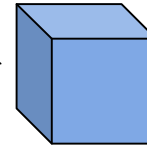


Linguistic: Signified
Scholastic: *Conceptus*
Peirce: Interpretant
Husserl: Intentionality

Sign



Linguistic: Signifier
Scholastic: *Vox*
Peirce: Foundation of sign
Husserl: Noeme



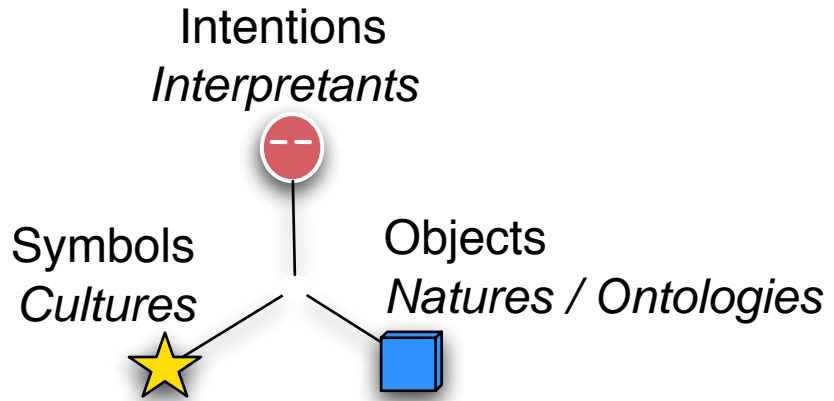
Thing

Linguistic: Referent
Scholastic: *Res*
Peirce: Object
Husserl: Object

Communication

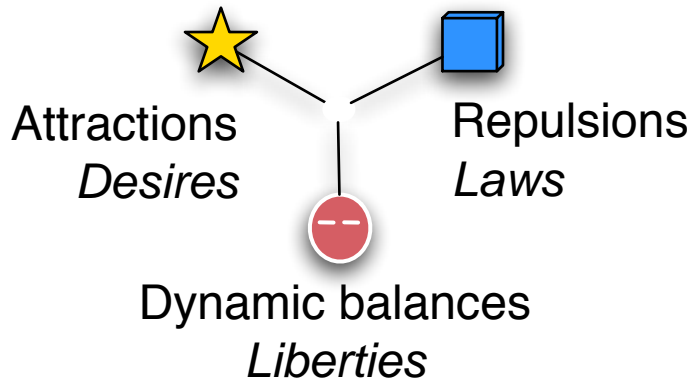
Universes of possible meanings

CONCEPTS



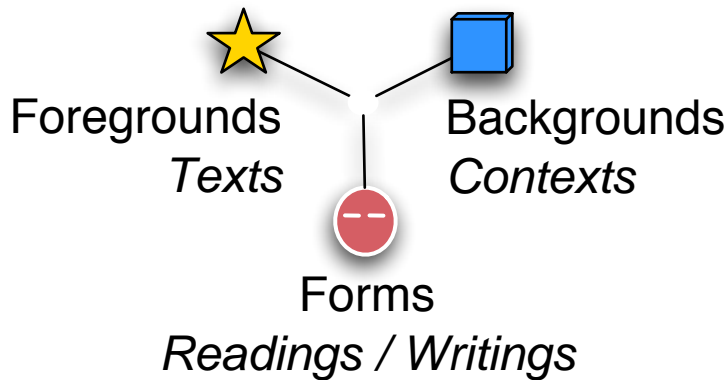
↑
to the
virtual

AFFECTS



↑
to the
actual

PERCEPTS



Experience

Possible spatio-temporal universes

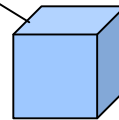
emotional
intelligence

Religion, ethics, law,
institutions, psychology
relational thought



Culture

formal
intelligence



Practical
intelligence

Mathematics, philosophy,
communication, art,
literature, semiotics,
abstract thought

Hunting, fishing,
agriculture, architecture,
industry, engineering,
technical thought

Disciplines

Intellectual,
spiritual, social,
practical

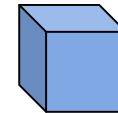


Augmentations of Language

Sign
Systems



Notation &
writing systems



Media

Recording,
multiplication,
diffusion

History of Human Language

Cyberspace



Ubiquity, interconnection and autonomous action of cultural signs.

Mass Media



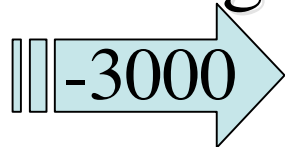
Technical self-reproduction of alphabet and images. Electric media.

Alphabet



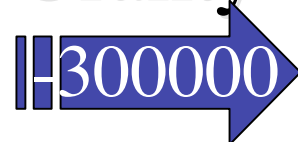
Universal digital writing system using +/- 30 signs

Writing



Technical autonomous memory of language. Ideograms

Orality



Myths, rites, oral transmission, memory in matter

Limits of the Contemporary Web

- Linguistic, cultural and disciplinary fragmentation.
- Search engines look for *characters strings* instead of looking for *concepts* or *subjects* (that are independent from words in natural languages).
- No *automatic hyperlink generation* between documents on same subjects.
- No *automatic semantic distance calculus* (even in relatively homogeneous corpuses).
- No *transverse automatic inferences* (across ontologies, terminologies or documentary languages).

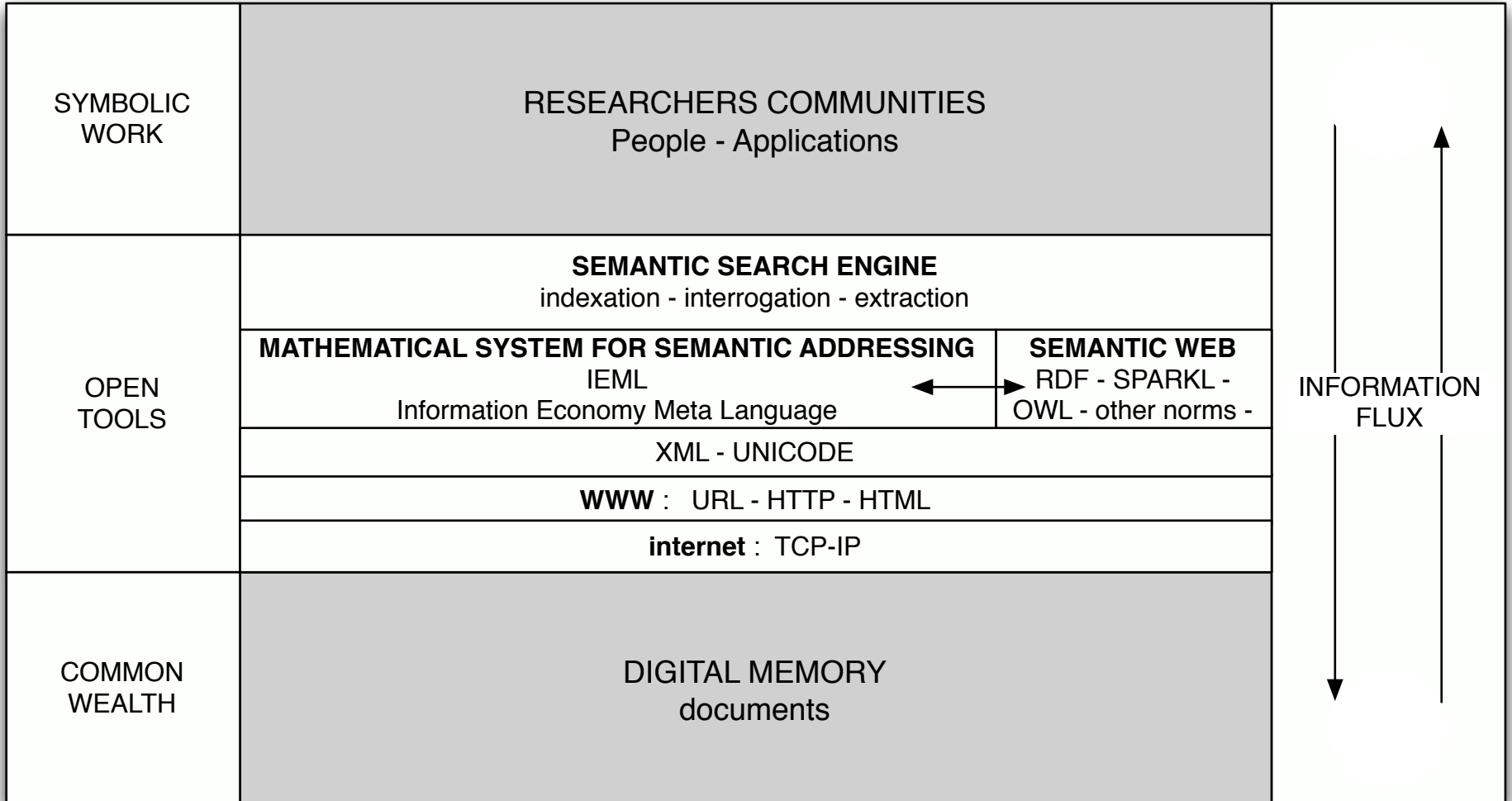
Towards a global computable metalanguage

- **(1) Natural condition:** Natural languages are designed by biological evolution to be processed by brains, not by computers.
- **(2) Cultural condition:** Interconnected digital processors compose the global medium of human language and cultural signs.
- **(1) + (2) => Problem**
- **Response to the problem:** A computable (or mathematical) system of concepts representation indexing digital documents
- **Result:** Full *automatic* exploitation of the digital information *across* linguistic, cultural and disciplinary *barriers*.

Metalanguage Features

- Rational connection between numbers and concepts
- Indefinitely open (like numbers and concepts)
- Peer to peer relation between concepts
- Built and discussed in public by a community of specialists.

INFORMATION ECONOMY



conceptware

cognitive
computing

software

classical
computing

hardware

MEASURABLE SEMANTIC & PRAGMATIC PHENOMENA

cultural sciences

MATHEMATICAL CALCULUS

natural sciences

MEASURABLE PHYSICAL & BIOLOGICAL PHENOMENA

