

Organizations as cognitive systems what do they process and deliver?

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Explorative talk

- No empirical results
- No simulation model
- No consolidated theory

Main questions

- How knowledge is created?
- What is *tacit* knowledge?
- Is it peculiar of human systems?
- Are organizations cognitive systems?
- What do they process and deliver?
- If knowledge were an emergent outcome of cognitive systems, would it be peculiar just of *human* cognitive systems?

What is tacit knowledge?

- It is non-codified *but codifiable* knowledge
 - It is non-codifiable knowledge
- It *is* knowledge, because codified knowledge is an oxymoron

What is knowledge?

- **Epistemology of possession: it is information**
- (standard economics, strong artificial intelligence, traditional approaches to knowledge management)

vs.

- **Epistemology of practice: it is a mental event produced by interacting**
- (cognitive economics, management and organization science, modern approaches to knowledge management and social psychology)

Epistemology of practice

- According to connectivism, the knowledge-based view of organizations argues that...
- Knowledge is an emergent outcome coming from ...
 - Information holders?
 - Knowledge holders?

What do information processors produce?

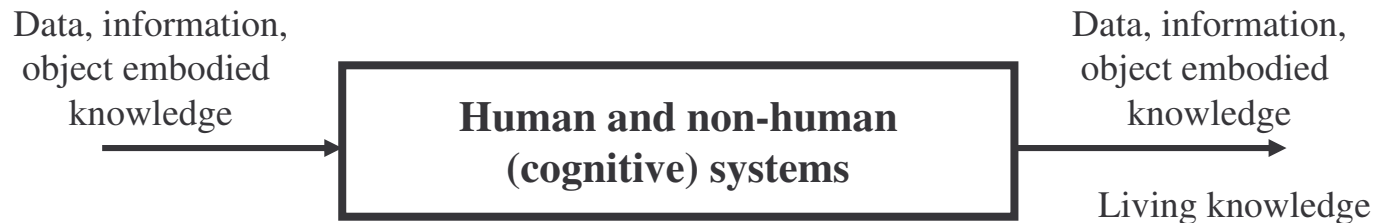
- Data?
- Information?
- Knowledge?
- Eventually *tacit* knowledge?

Death and living knowledge

Death knowledge = object embodied knowledge

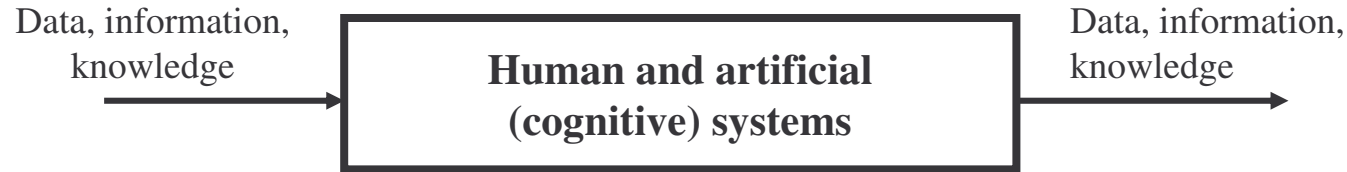
Living knowledge = cognitive systems embodied knowledge

Cognitive systems = human and non-human (cognitive) systems

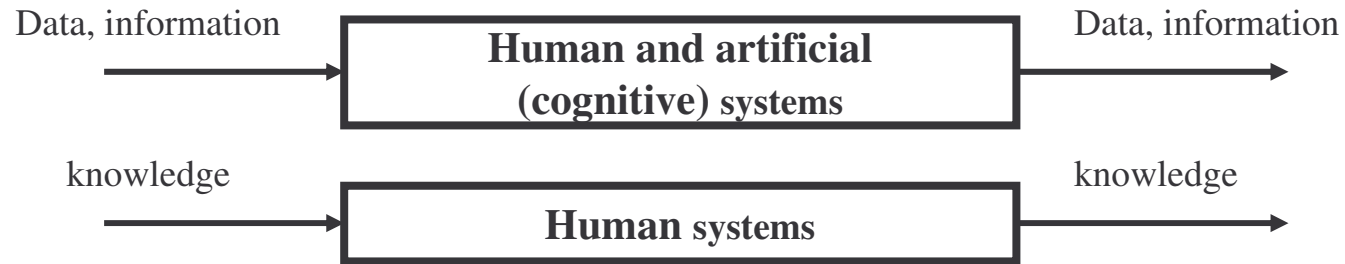


The peculiarity of organizations is that, due to the fact that the most important medium among its members is natural language, its members can belong at the same time to different organizations (multiple membership). This way social systems can continually recombine and transfer living knowledge between organizations and territories. Can non-human cognitive systems do the same? Does make sense to suppose physical multiple membership?

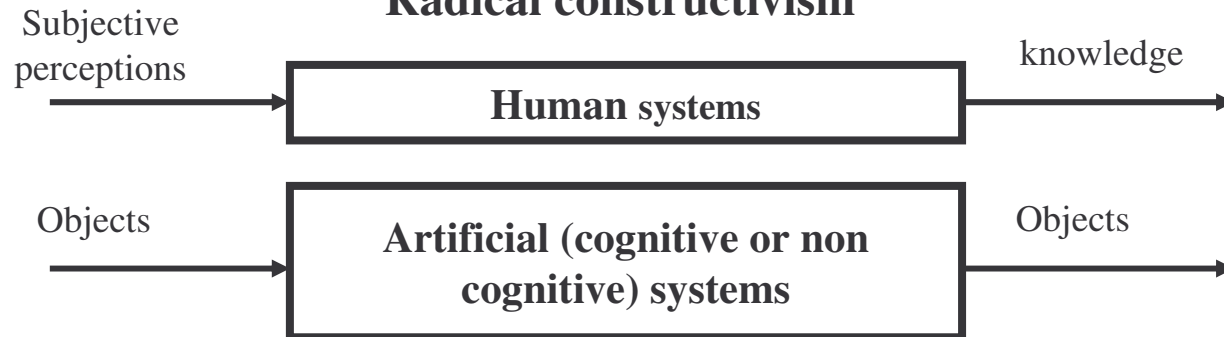
Strong program of artificial intelligence



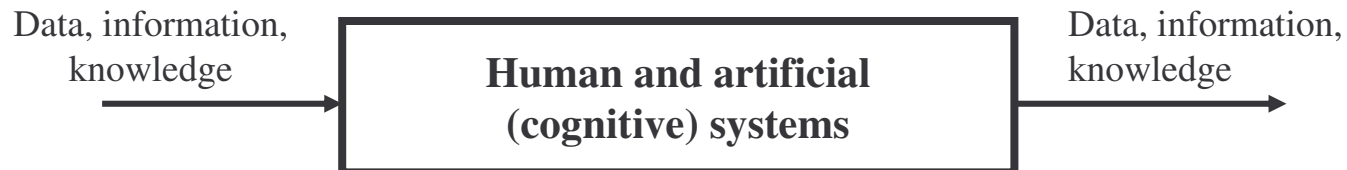
Weak program of artificial intelligence



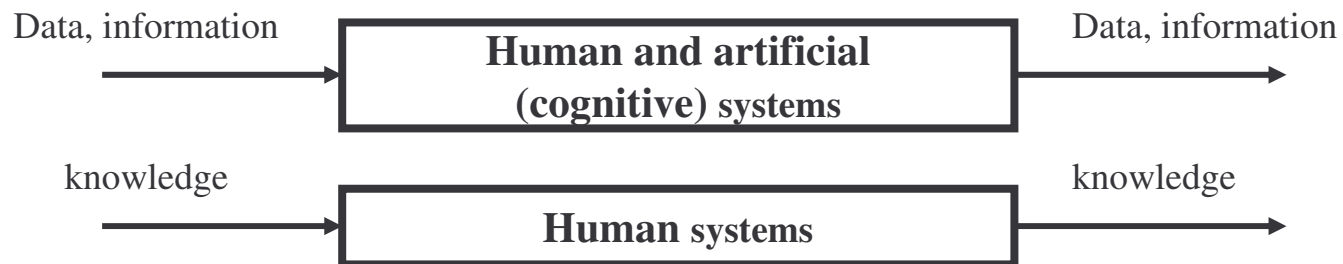
Radical constructivism



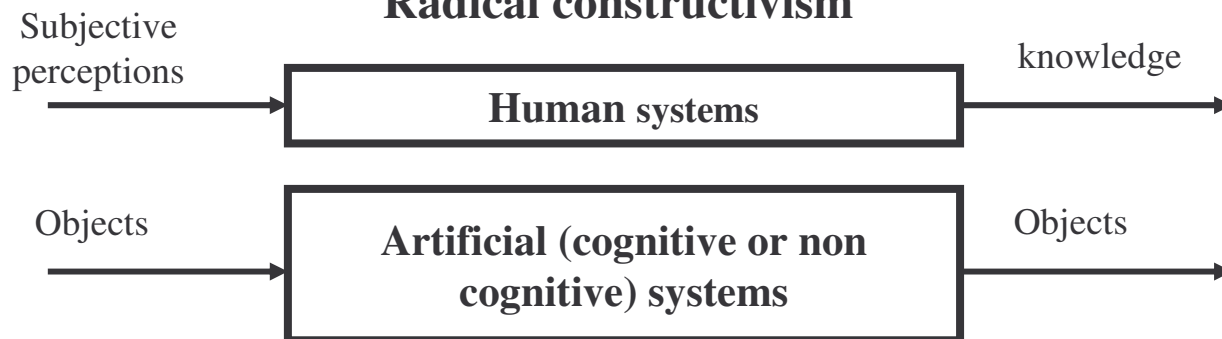
Cognitivism

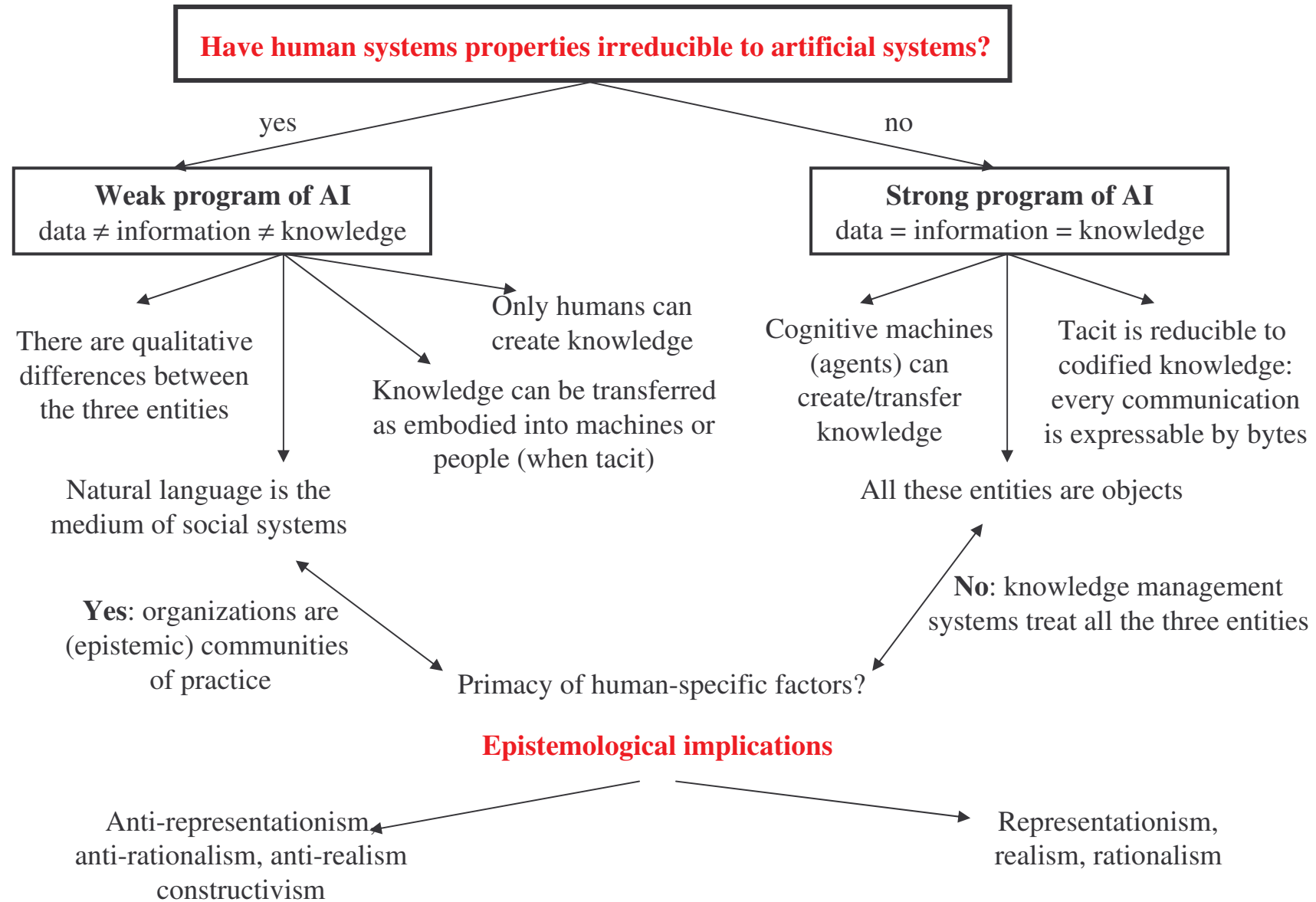


Connectivism



Radical constructivism





The mind-body problem

- 1) Cartesio: ontological dualism
- 2) Churchland: eliminative materialism
- 3) reductionism: mental events can be reduced to physical events: two variants
- 4) Davidson: ontological but not nomological reducibility: mental events cannot be predicted from physical events
- 5) Nightingale: partial reducibility because of the domain of unconsciousness

A new categorization of knowledge

Unconscious states

Conscious states

Knowledge non verbalized

Knowledge Verbalized but not written

Knowledge Written but not codified

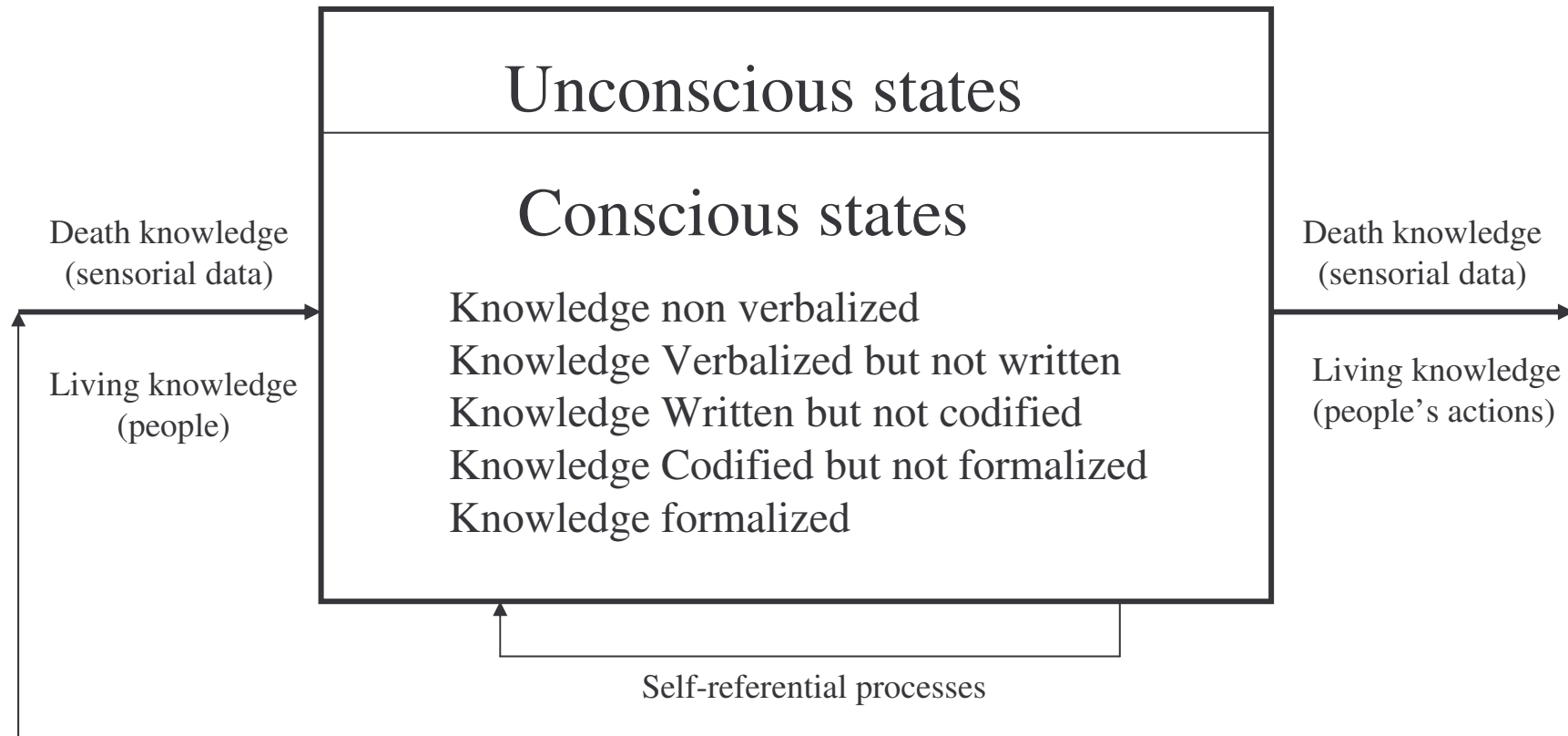
Knowledge Codified but not formalized

Knowledge formalized

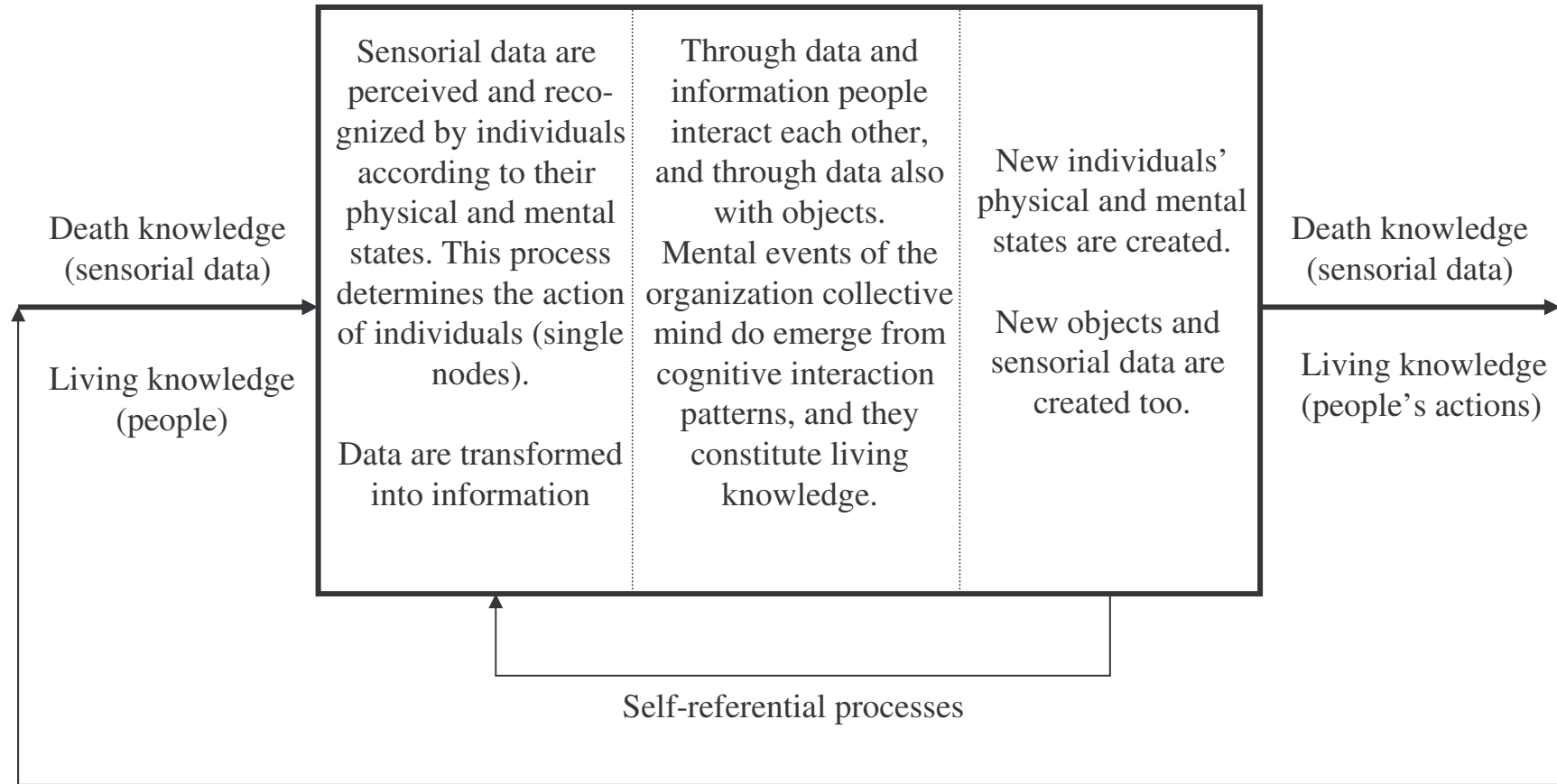
Data, information and knowledge creation at the individual level

Reductionist approach, based on the theory of tokens, with two variants:

- 1) Explicative limit due to the autonomy and anomaly of mental events;
- 2) Without limits in principle, but with empirical limits due to gnosiological and semiotic complexity.



Data, information and knowledge creation at the organizational level



Conclusion

- If knowledge is an emergent phenomenon produced by a network of information processors, then a computer network is supposed to produce knowledge as well as a single individual or an organization (or a network of organizations)
- Could internet have its own consciousness and produce knowledge?