

information and mind

Derek Jones
The Open University

Information and mind

Information - Floridi's open problems:

P4 [DGP] Data grounding problem – How can data acquire meaning?

P11 [MBP] Mind body problem – Can an informational approach solve the mind/body problem?

Floridi, L. (2004). Open Problems in the Philosophy of Information. *Metaphilosophy*, 35(4), 554–582. doi: 10.1111/j.1467-9973.2004.00336.x

Information and mind

Normative tradition of 'information-as-entity' and 'mind-as-entity'

When considering data transmission the first is fine;

When considering semantic information the latter is fine;

But when you wish to put them together...

**all is not well in
normative science and
philosophy**

James, 1904

“Does consciousness exist?”

“That entity is fictitious, while thoughts in the concrete are fully real. But thoughts in the concrete are made of the same stuff as things are.”

James, W. (1904). Does “Consciousness” exist? *The Journal Of Philosophy Psychology And Scientific Methods*, 1(18), 477–491.

Merleau-Ponty, 1962

“We thought we knew what sensing, seeing and hearing are...”

“The classical notion of sensation was not itself a concept derived from reflection, but rather a recently developed product of thought turned toward objects”

Merleau-Ponty, M. (1962). Phenomenology of perception. London: Routledge & Kegan Paul.

Landauer, 1996

“Information is always tied to a physical representation”

“When we first learned to count on our very classical and sticky little fingers we were misled into thinking about information as a classical entity.”

Landauer, R. (1996). The physical nature of information. *Physics Letters, Section A: General, Atomic and Solid State Physics*, 217(July), 188–193. doi:10.1016/0375-9601(96)00453-7

new knowledge

“Accordingly those who agree with James in this matter advocate what they call neutral monism according to which the material of which the world is constructed is **neither mind not matter but something anterior to both.**” (Russell, 1996)

“Thus, this is a want ad for a **self-consistent theory.**” (Landauer, 1996)

another approach

Information and mind

“Does consciousness exist?”

Pragmatic tradition in philosophy - Occam's razor

Embodied approach to ontology **and** epistemology

Words are representations of thoughts / knowledge

Searle, 1980

“The single most surprising discovery that I have made in discussing these issues is that many AI workers are quite shocked by my idea that **actual human mental phenomena might be dependent on actual physical/chemical properties of actual human brains.**”

Searle, J. R. (1980). Minds, Brains, and Programs. *Behavioral and Brain Sciences*, 3, 1–19. doi:10.1017/S0140525X00005756

embodied cognition

embodied cognition

All thoughts are grounded

The mind, thoughts, ideas, me, 'I', etc. all depend on cognition;

Cognition takes place in the brain, limbic system and CNS of the body;

Hence cognition and thereby 'the mind' is physically grounded.

embodied cognition

The whole, not the parts

Mind and body are not separate entities as defined normatively - they are representations we create and **only appear separated**

Embodied cognition depends on the entire system, not the individual parts

Embodied cognition is not a normative system - **cause and effect is not perceivable** at any scale (as yet!)

embodied cognition

Knowledge has a physical basis

Knowledge, memory, thoughts, ideas are all symbols we use to try and articulate those self same entities

We underestimate how much these symbols depend on embodiment

‘Lazy’ epistemologies are rife! (dualities; sorting; category bias; preferential knowing;...)

consequences...

Consequences 1

If cognition and information are embodied

Information is not some intangible, anterior entity (we tend to assume it is, in the same way we do with the 'mind').

We have to be able to answer the question 'what is information?' by pointing to it (words, shapes, bits)

The quality (information) has to be replaced by the entity (information).

Information is not 'transferred' - it is constantly destroyed/created...

Consequences 2

The whole, not parts

Shannon is not enough - normative methods of reduction do not work to describe the system

Churchman is too much - there is no entity to which we can 'point' and say this is information

The terms (dualities) used in P4 and P11 are no longer valid as disembodied entities

Consequences 3

Knowledge has a physical basis

Just as we **believe** (not know) mind is separate from body, we separate meaning from information (or information from data)

Reconceptualising alternative epistemologies is very, very difficult!

P4 and P11 have no meaning as questions in a grounded information epistemology

3

where is information?

?