Mental Life

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  www.barandiaran.net/textos/life_n_mind_sokatira
- **Structure of the session:**
  - Short introduction (+ ads)
  - Academic Sokatira: TRUE or FALSE (welcome to the binary world)
  - Open discussion

intro

buy it

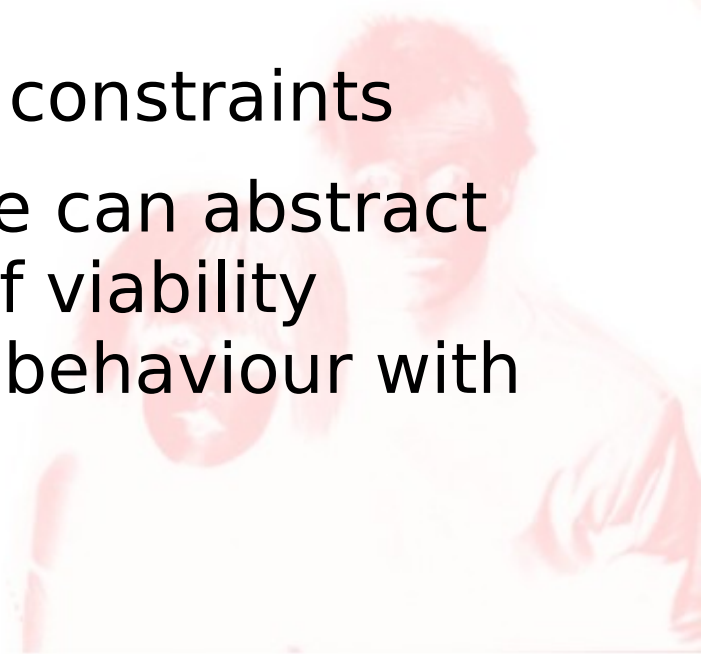
- Google Ads.

Maturana & Varela 1980

- **Autopoiesis [life] = Cognition**
  - Cognition is behaviour (structural coupling) on the domain of conservation of autopoiesis

Beer 1997

- “An agent's need to maintain its existence [conservation of autopoiesis] in its environment defines a viability constraint on its behavioural dynamics”
- **Cognition = adaptive behaviour**
  - Autopoiesis defines the viability constraints
  - If we want to model cognition we can abstract away autopoiesis, define a set of viability constraints and model adaptive behaviour with dynamical systems



Varela 1991

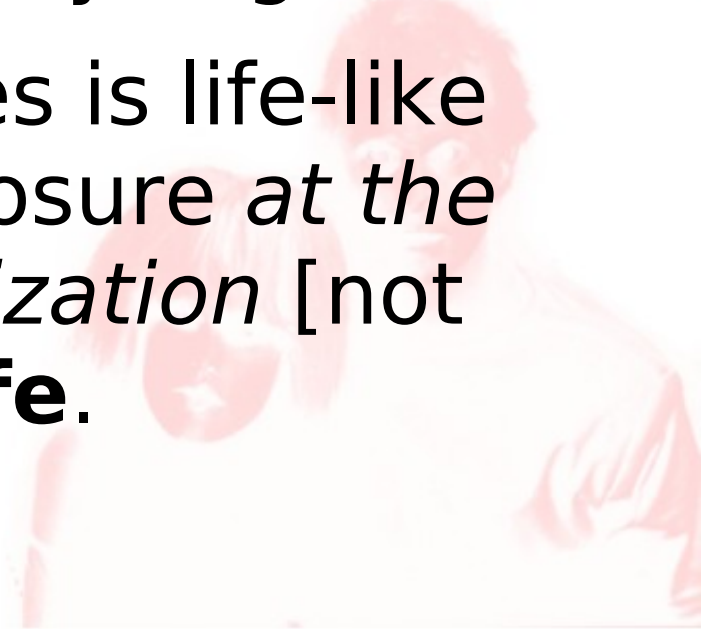
- “The operational closure of the nervous system brings forth a specific mode of coherence, which is embedded in the organism.
- This coherence is a cognitive identity: a unit of perception/motion in space, sensory-motor invariances, mediated through the interneuron network.
- The passage to cognition happens at the level of a behavioral entity and not, as in the basic cellular self, as a spatially bounded entity”

Di Paolo 2003 & 2007

- "The conservation of an organised meshwork of habits [self-maintained behavioural structures] is the basis on which to ground artificial intentionality"
- “[T]here are ways of modelling and maybe even instantiating artificial autonomy that do not require building a fully autopoietic artificial system.”

my PhD (hypo)thesis

1. Metabolically driven agency [adaptive behaviour serving autopoietic values] might be insufficient, *even unnecessary*, for mindfulness/intentionality/cognition;
2. What intentionality requires is life-like self-sustaining adaptive closure *at the level of behavioural organization* [not metabolic]: i.e. **Mental Life**.



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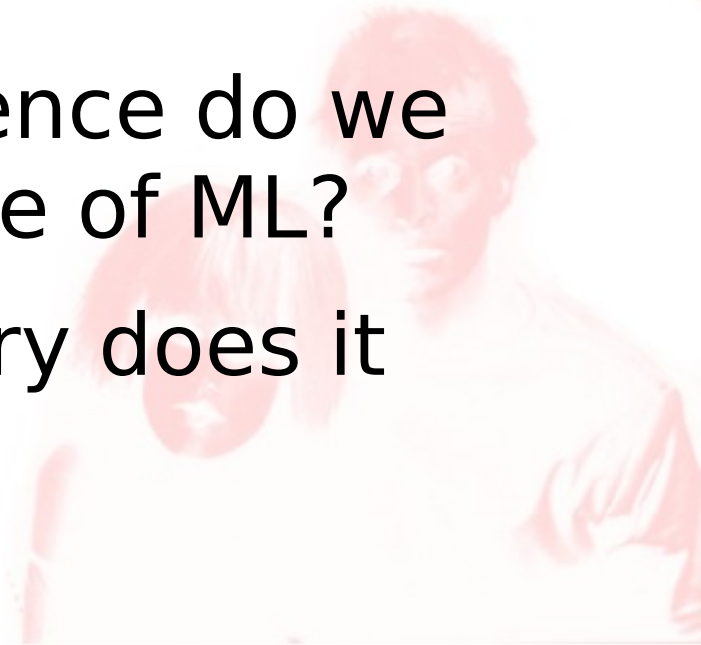
- How to model self-maintenance with dynamical systems?
- What constitutes a genuine minimal example?
- What kind of empirical evidence do we have to sustain the existence of ML?
- Where in phylogenetic history does it appear?



TRUE or FALSE

welcome to the binnary world

sokatira

sokatira

rules for academic sokatira

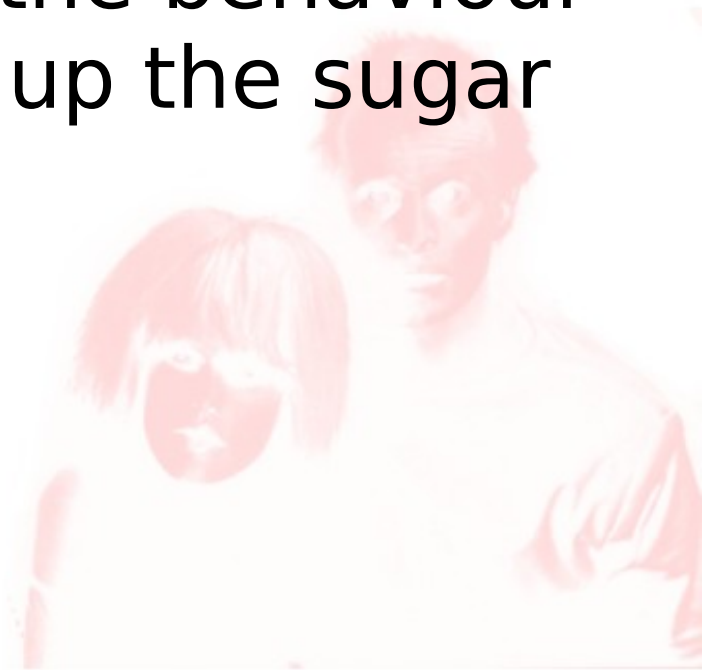
- The classroom is divided into two distinct sides with no tables and chairs in the middle.
- Everybody stands up in the middle of the two sides of the classroom.
- A “controversial” sentence is proposed.
- 30seconds are given so that **everyone** situates on one side or the other of the classroom, one side meaning agreement with the proposed sentence, the other disagreement.
- The goal is that, through organized discussion, people on one side of the classroom convince people on the other side to change their mind about the content of the proposed sentence and move to their side.

sentence 0

The behaviour of a robot that is capable of recharging its batteries is more “autonomous” than the behaviour of an otherwise identical robot that cannot

sentence 1

The behaviour of a mutant bacteria swimming down the sugar gradient is as intentional for the bacteria as the behaviour of a “normal” bacterial going up the sugar gradient



sentence 2

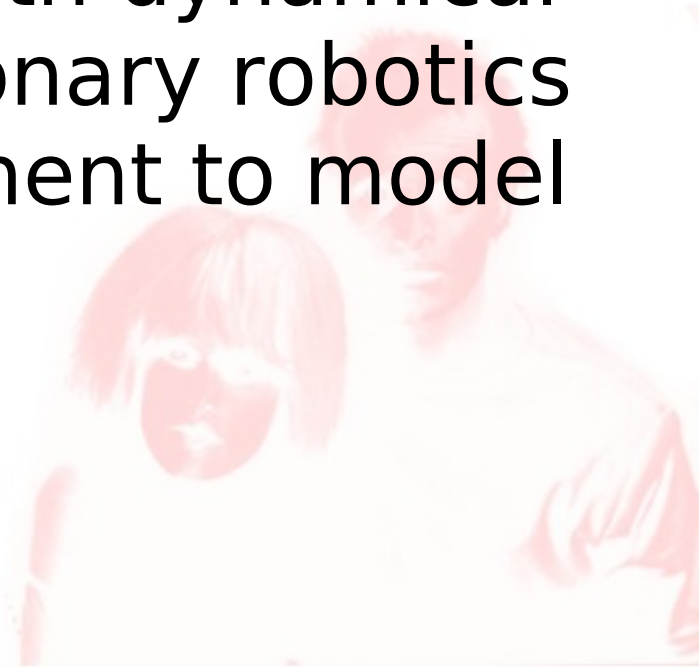
Although it is slowly destroying its autopoiesis the invisible source of radiation next to the the cat is meaningless for her.

sentence 3

The behaviour (landmark navigation) produced by a network of cultured living neurons in a petri dish, embodied on a robot, is as genuinelly cognitive as the same behaviour enacted by an ant

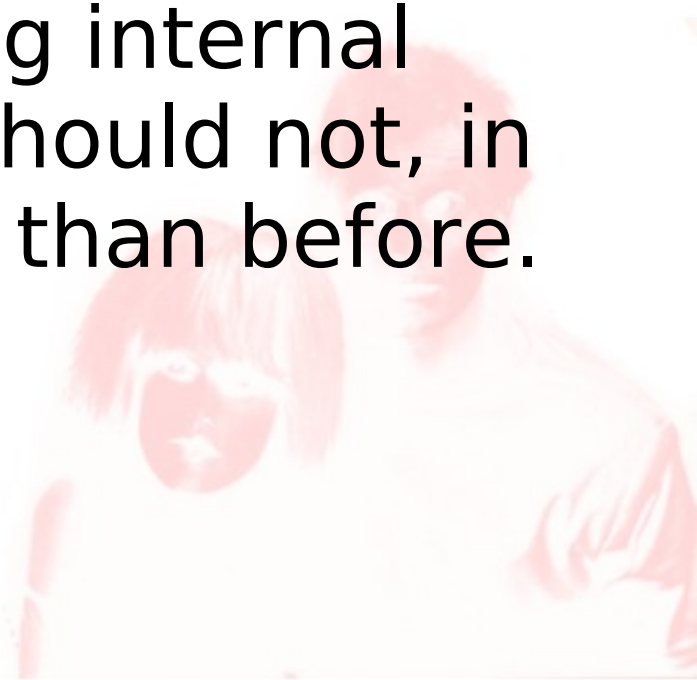
sentence 4

Autopoiesis (recursivelly self maintaining far-from-thermodynamic-equilibrium dissipative organization) cannot, in principle, be fully modelled with dynamical systems, thus current evolutionary robotics is lacking an essential component to model cognition



sentence 5

When we cut, in a mammal, the nerves that connect the sensorimotor nervous system (generating behaviour) with the autonomic nervous system (controlling internal bioregulation) its behaviour should not, in principle, be less meaningfull than before.



open discussion about the most relevant topics raised during the previous game