



Cognition – Basic Modelling of Reality

Real

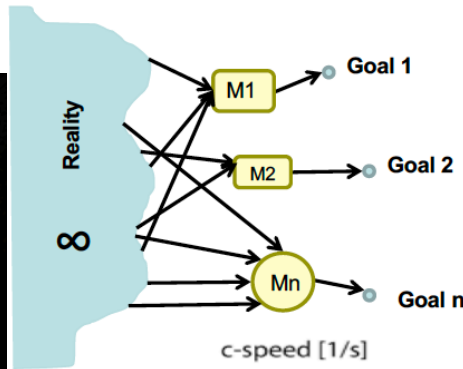
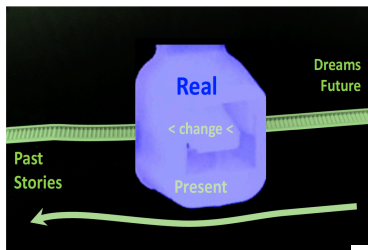
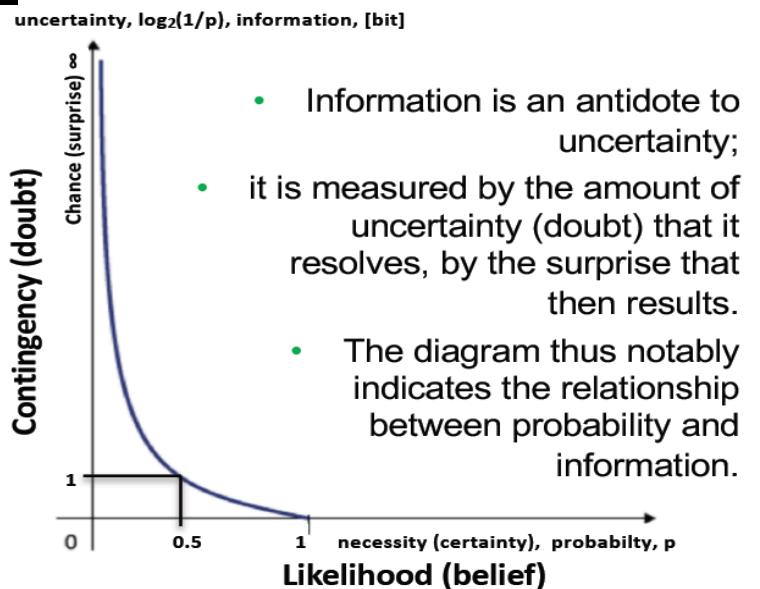
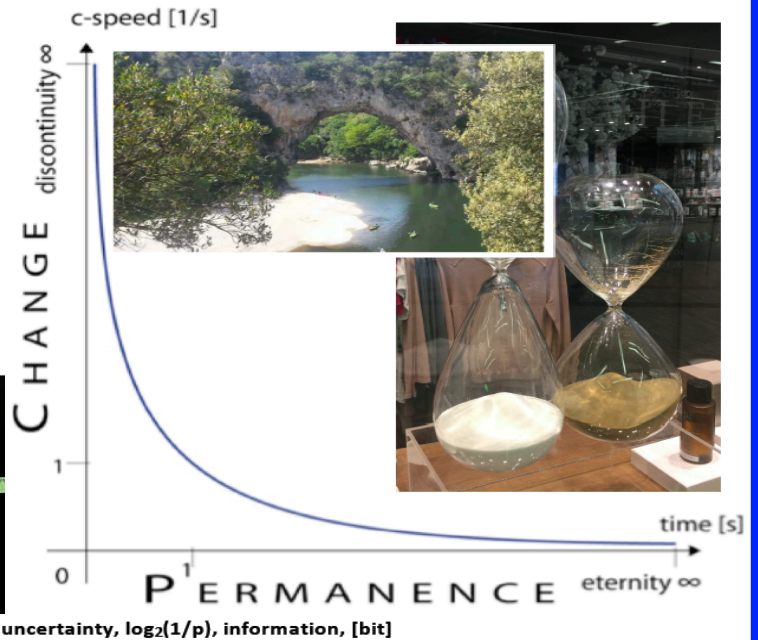


Fig. Reality is very complex but selecting a goal typically allows for convenient, infinitely simpler models.

- What is
- Infinitely complex
- Inviolable laws



- Time
 - Change
 - Permanence
- Probability and Information
- Definitions (i.e. basic models)
 - Dictionary
 - Samples and examples
- Sciences
 - Laws of physics and nature
 - Standards, units of measurement
 - Reference experiments
 - Recordings (memory)



- Information is an antidote to uncertainty;
- it is measured by the amount of uncertainty (doubt) that it resolves, by the surprise that then results.
- The diagram thus notably indicates the relationship between probability and information.

References.:

1. J.-D. Dessimoz, HESSO.HEIG-VD, 2nd Int. Conf. on Natural Cognition, 10-11 Dec. 2015, Macao
2. Cours AIC-Automatisation avancée, intelligence artificielle et cognitive, JDZ, HESSO.HEIG-VD, Yverdon-les-Bains, Suisse, 20 février 2017
3. SGAICO Annual Assembly and Workshop Deep Learning and Beyond, Nov. 16, 2016 - Hochschule Luzern Informatik - Campus Zug-Rotkreuz, Switzerland
4. Robotics and Automated Systems-Elsevier, nov. 2016, <http://dx.doi.org/10.1016/j.robot.2016.08.008>
5. J.-D. Dessimoz, "Principes de vie - cognition et sagesse", Conférences et discussions philo / éco / mythe, Événement "Un Lieu", Claire Dessimoz organisatrice, Espace d'Art Tunnel Tunnel, progr. Sophie Ballmer, Olivia Fahmy, Anne Sylvie Henchoz et Guillaume Pilet, Lausanne, 13.10.2018
6. Jean-Daniel Dessimoz, « Cognition and Cognitics – Definitions and Metrics for Cognitive Sciences, in Humans, and for Thinking Machines, 2nd edition, augmented, with considerations of life, through the prism "real – imaginary – values – collective", and some bubbles of wisdom for our time », Robotics Editions llc, Cheseaux-Noreaz, Switzerland, 345 pp, March 2020.