* Lomonosov Moscow State University – Dept. of Philosophy *
* International Seminar on Neurophilosophy * Dec 17 2015

MEANING GENERATION AND SELF-CONSCIOUSNESS:

NEUROPHILOSOPHICAL APPLICATIONS OF AN EVOLUTIONARY SCENARIO?

C. Menant

Abstract

The nature of human mind has been an open question for more than 2000 years and it is still today a mystery.
There has been during the last 30 years a renewed interest from science and philosophy on that subject.
Among the existing research domains is neurophilosophy, an interdisciplinary study of neuroscience and philosophy looking at neuronal aspects of access consciousness, of phenomenal consciousness and at functional aspects of consciousness.
We propose here to look if self-consciousness could have a place in neurophilosophy by using an existing evolutionary scenario that can introduce possible links between neural processing and some aspects of self-consciousness.
The scenario is about an evolutionary nature of self-consciousness where evolutions of inter-subjectivity and meaningful representations may have led our ancestors to identify with their conspecifics. The scenario proposes that this process has brought our pre-human ancestors to represent themselves as existing entities like the conspecifics they identified with were represented.
Such a representation of oneself as an existing entity may have created an elementary version of self-consciousness that we name "ancestral self-consciousness".
But identification with suffering or endangered conspecifics has also produced an important anxiety increase. To limit that anxiety our ancestors have developed mental states and behaviors like caring, imitation communication and simulation. These performances have introduced evolutionary advantages leading to an evolutionary engine that has favored the development of ancestral self-consciousness toward our human self-consciousness.
We begin by presenting a model for the generation of meaningful information based on a system submitted to an internal constraint (the Meaning Generator System). We use that model to introduce meaningful representations as networks of meaningful information.
We then present the evolutionary scenario for self-consciousness that uses meaningful representations and the performance of inter-subjectivity. The scenario leads to propose two links between self-consciousness and neural processes: mirror-neurons as neural introduction to inter-subjectivity and self-consciousness as neural computation on meaningful representations.
Possible continuations are highlighted.

MEANING GENERATION AND SELF-CONSCIOUSNESS:

NEUROPHILOSOPHICAL APPLICATIONS OF AN EVOLUTIONARY SCENARIO?

C. Menant

* Purpose of the Talk *

- Present an Evolutionary Scenario for Self-Consciousness based on Meaning Generation and Inter-subjectivity.
- Introduce Potential Links with Neurophilosophy

a) Meaning Generation and Meaningful Representations

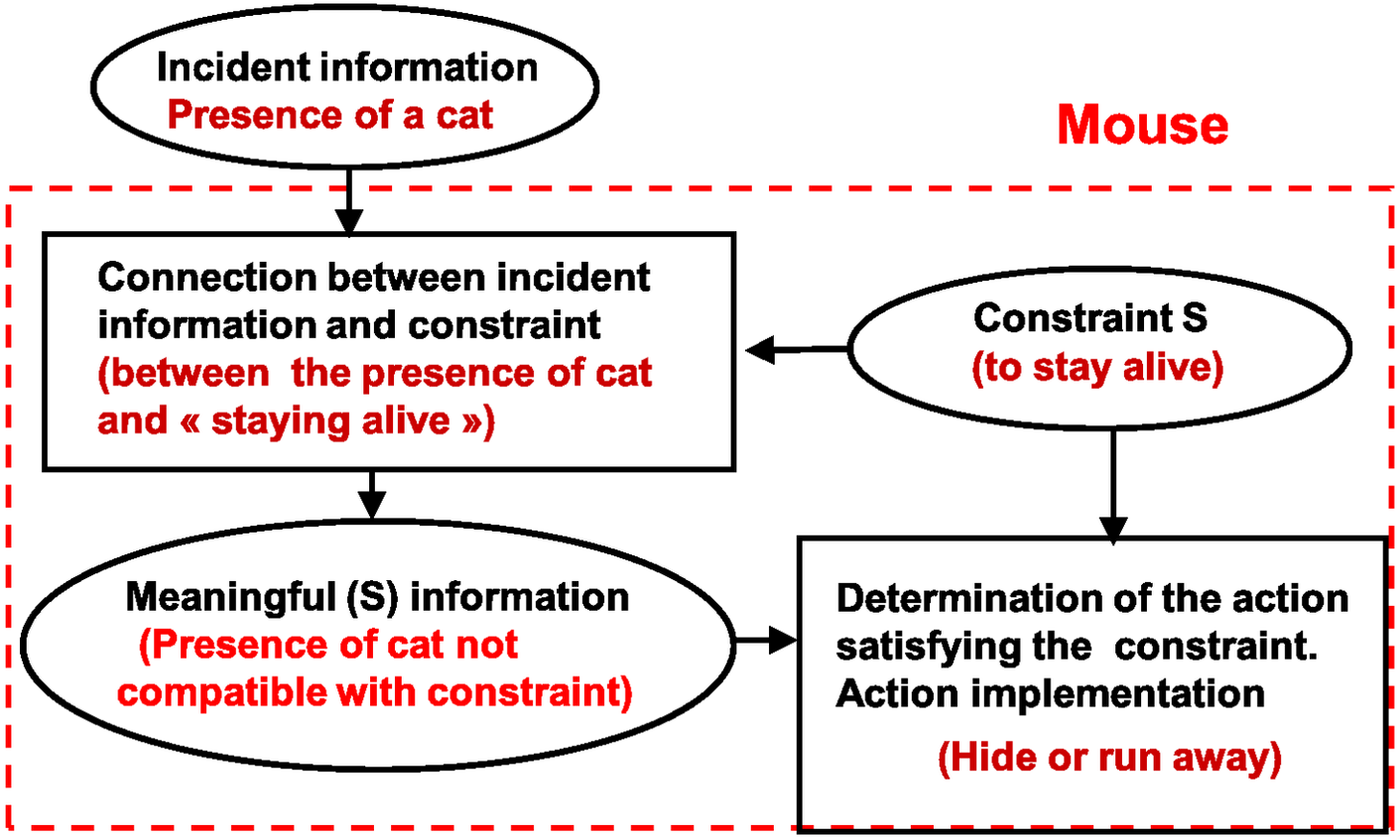
b) Evolutionary Scenario for Self-Consciousness

c) Potential Applications to Neurophilosophy. Continuations

MEANING GENERATION AND SELF-CONSCIOUSNESS: NEUROPHILOSOPHICAL APPLICATIONS OF AN EVOLUTIONARY SCENARIO?

C. Menant

a) Example of Meaning Generation (Mouse identifying the presence of a cat)



Generated meaning = connection between incident information and constraint

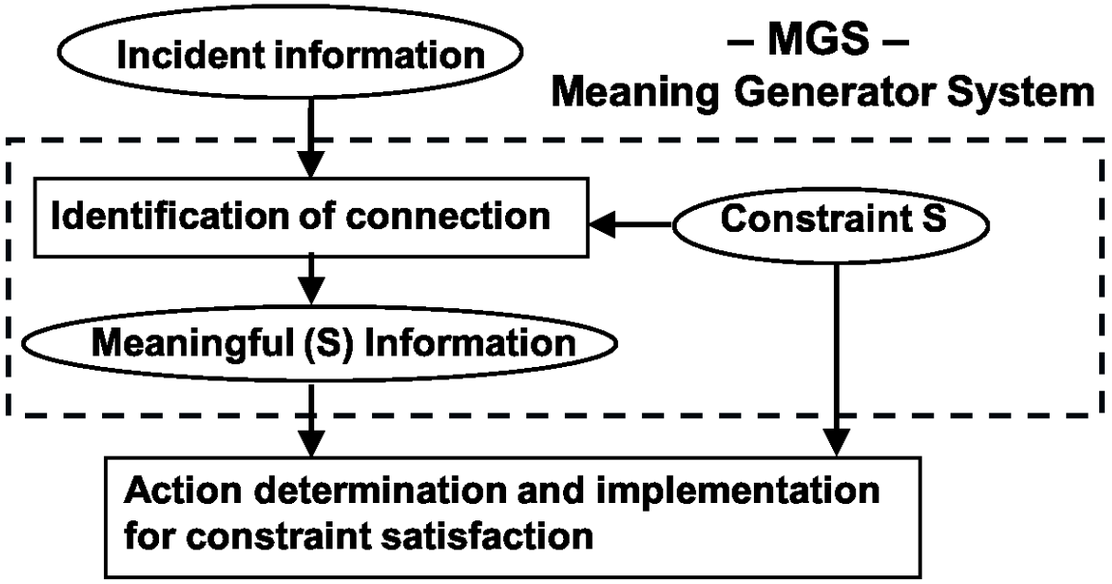
(http://philpapers.org/rec/MENITA-5)

MEANING GENERATION AND SELF-CONSCIOUSNESS: NEUROPHILOSOPHICAL APPLICATIONS OF AN EVOLUTIONARY SCENARIO?

C. Menant

a) Meaning Generation & Meaningful Representations (http://philpapers.org/rec/MENITA-5)

* Meaning Generator System (MGS) belongs to agent submitted to internal constraint
* Meaningful information = connection between incident information and constraint
* Meaning generation by agent for the satisfaction of the constraint
* Constraint satisfaction by internal or external action (mental, physical, DP)



Animal constraints:
- *Stay alive*
- *Live group life*

Human constraints:
- *Look for happiness & pleasure*
- *Avoid pain. Limit anxiety*
- *Valorize ego, ….*

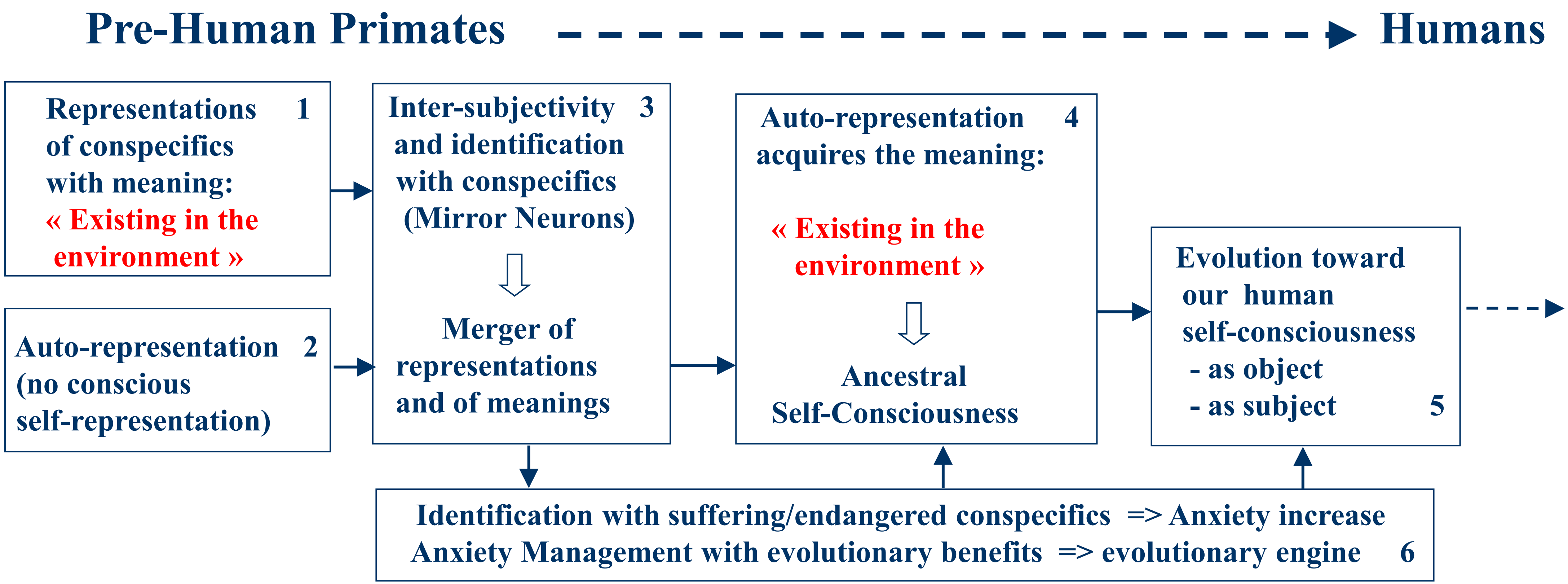
Artificial Agent constraints:
- *As programmed*

(http://philpapers.org/rec/MENTTC-2)

* Meaningful Representation as network of meanings for constraints satisfaction.
  - Include past experiences & action scenarios (http://philpapers.org/rec/MENCOI)

MEANING GENERATION AND SELF-CONSCIOUSNESS:
NEUROPHILOSOPHICAL APPLICATIONS OF AN EVOLUTIONARY SCENARIO? C. Menant

b) Evolutionary Scenario for Self-consciousness (short version of http://philpapers.org/rec/MENCOO)



- **Representation of one's own entity as existing in the environment like conspecifics are represented => Ancestral Self-Consciousness & Self-Consciousness as meaningful representations**

- **Anxiety Management => evolutionary engine** (http://philpapers.org/rec/MENPFA-3)

- **Evolutionary benefits of Self-Consciousness come from anxiety management processes**

* International Seminar on Neurophilosophy * Moscow Dec 17 2015 (5/5)

MEANING GENERATION AND SELF-CONSCIOUSNESS:
NEUROPHILOSOPHICAL APPLICATIONS OF AN EVOLUTIONARY SCENARIO? C. Menant

c) Potential Applications to Neurophilosophy. Continuations.

* Neurophilosophy and Philosophy of mind

- **Focus on phenomenal consciousness, on access consciousness and on functionality**
- **Limited usage of self-consciousness** (http://philpapers.org/rec/MENPFA-3

* Evolutionary Scenario => Self-Consciousness for Neurophilosophy

- **Self-consciousness as neural computation on meaningful representations**
- **Mirror-neurons as neural introduction to inter-subjectivity** http://philpapers.org/rec/GALTSM)

* Continuations

- **Link neurophilosophy to self-consciousness as object and as subject**
- **Better positioning of self-consciousness relatively to other types of consciousness**
- **Get a better understanding of human specific constraints related to anxiety management**
- **Self-Consciousness needs life => concerns for AI** (http://philpapers.org/rec/MENTTC-2)