

Evolutionary Advantages of Intersubjectivity and Self-Consciousness through Improvements of Action Programs

(Poster for TSC 2010 TUCSON. Feb 24 2010 version)

<http://www.consciousness.arizona.edu/2010TSCProgramUpdated.htm>

Christophe Menant (<http://crmenant.free.fr/Home-Page/index.HTM>)

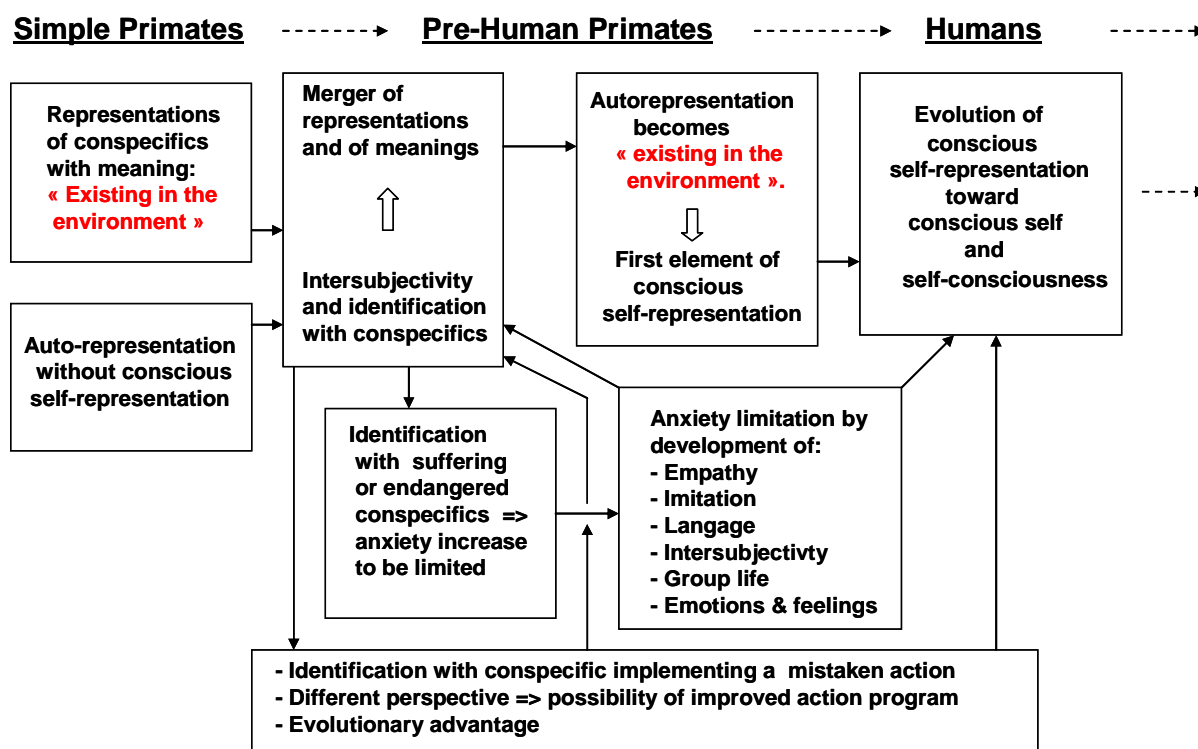
1) Evolutionary advantages of intersubjectivity and self-consciousness:

* Anxiety limitation process (1), (2), (3):

- Intersubjectivity and identification with suffering/endangered conspecifics => anxiety increase.
- Anxiety limitation by development of Empathy, Imitation, Language, Group life, Intersubjectivity.
- Positive feedback. Evolutionary advantage.

* Action programs improvements:

- Intersubjectivity => agent identifies with the observed conspecific.
- Agent feels as her own a mistaken action of observed conspecific.
- Agent perceives from her position the mistaken action of conspecific. A different perspective can bring up new action programs that avoid the mistake.
- Improved action programs are available to the agent. Transfer to conspecifics through imitation processes.
- Evolutionary advantage.



2) Possible link between self-consciousness and phenomenal consciousness:

- * Evolution of the non self-conscious auto-representation towards conscious self-representation contains primitive versions of self-consciousness that can introduce pre-reflexive self-consciousness (4).

3) Continuation:

- * Detail the representational nature and content of conscious self-representation and self-consciousness.
- * Deduce a possible evolutionary nature of pre-reflexive self-consciousness.
- * Analyze the evolutionary roots of intersubjectivity in animals.
- * Analyze possible application to artificial systems and robots.

References:

- (1) TSC 2005: <http://cogprints.org/4533/>, (2) TSC2006: <http://cogprints.org/4843/>,
(3) ASSC 10 (2006): <http://cogprints.org/4957/>, (4) ASSC 12 (2008): <http://cogprints.org/6120/>