

Beth and Sarah – V1

We have been discussing about, and somewhat converging towards a model of consciousness informed by our respective backgrounds in anthropology [Sarah], including some cognitive anthropology and a few papers in neuroanthropology (intersection of anthropology and neuroscience), and psychology and neuroscience [Beth].

We just present it as a series of yes-no questions (refs and/or examples included when relevant) for you to have a look at and compare/contrast with your own 'models'

DEFINITIONS:

Consciousness = SUBJECTIVE EXPERIENCE

Emergence.. weak or strong? (cf Clayton's book in Miguel's folder) = WE SUBSCRIBE TO "STRONG EMERGENCE" IN RELATION TO CONSCIOUSNESS, I.E. "THE MICRO-LEVEL PRINCIPLES ARE INADEQUATE TO ACCOUNT FOR THE SYSTEM'S BEHAVIOR AS A WHOLE" (CLAYTON AND DAVIES, 2006, xii), BECAUSE CONSCIOUSNESS EMERGES FROM INTERACTIONS BETWEEN THE MICRO-LEVEL COMPONENTS (here we seem to agree with Tonino [2011] although we haven't engaged in depth with his theory. Also, more generally in terms of processes, this seems to be supported by Hoel et al 2014).

MODEL:

-Is consciousness life-contingent? YES

-Does it require a sense of self? YES

-Is it equivalent to sense of self? NO (as we consider that we can observe sense of self when an organism has developed mechanisms to 'defend' their integrity against external intrusions, e.g. bacteria – difference here between Damasio's "protoself" and "core consciousness" – 1999. Also, Humphrey 1999)

-Does Godel's incompleteness theorem apply? PROBABLY

-Is it emergent? YES

-What does it emerge from? THE INTERACTION BETWEEN ORGANISM AND ENVIRONMENT: SENSATIONS BECOME EMOTIONS AND CONTAIN UNITS OF INFORMATION (DEFINED AFTER BATESON: A "DIFFERENCE THAT MAKES A DIFFERENCE") FROM WHICH SUBJECTIVE EXPERIENCE AND COGNITION EMERGE, AND FEEDBACK IN. (A KEY POINT OF THIS PHENOMENOLOGICAL MODEL IS THAT BRAIN CAN NOT BE DISSOCIATED FROM BODY, OR BODY FROM ENVIRONMENT – INCLUDING SOCIAL – WHEN TALKING ABOUT CONSCIOUSNESS. PARAPHRASING INGOLD (2010): CONSCIOUSNESS IS A PRODUCT OF THE "EMBODIMENT OF THE BRAIN AND THE ENWORLDMENT OF THE BODY" – see also Varela, link below)

-Is consciousness integrative? YES – IT INTEGRATES INFORMATION

-Is it selective? YES – IT SELECTS WHICH STIMULI BECOME INFORMATION
(Bateson 1972)

-Does it have a temporal dimension? YES – IT IS ADAPTIVE AND INTEGRATES
THROUGH TIME (INCLUDES MEMORIES, PROJECTIONS)

-Does consciousness have an evolutionary function? YES. IF IT DIDN'T THERE
SHOULD BE HUMANS WITHOUT IT (BUT WHAT FUNCTION?... ADAPTING QUICKLY
TO A CHANGING, INFORMATION-RICH ENVIRONMENT?...PLAYS A ROLE IN
PERCEPTION OF TIME? Humphrey 1999)

Questions for consideration (didn't have time to think / research / read further):

-*Where* is it located? Distributed?

-Is there a *scale* to consciousness?

Refs cited

Bateson, Gregory. 1972. Steps to an ecology of mind: Collected essays in
anthropology, psychiatry, evolution, and epistemology. University of Chicago Press.

Damasio, A. 1999. The Feeling of What Happens: Body and Emotion in the Making of
Consciousness. New York

Humphrey, N. 1999. Towards a science of consciousness III - MIT Cognet
Proceedings

Ingold, T. 2010. The social brain. Lecture at the Danish School of Education. URL:
http://www.routledge.com/articles/tim_ingold_speaks_about_the_social_brain1/

Tonino 2011 Integrated information theory of consciousness: an updated account.
Archives italiennes de biologie

Hoel, Albantakis and Tononi. 2014. Quantifying causal emergence shows that macro

Varela – A good introduction is there: http://www.scielo.cl/scielo.php?pid=S0716-97602003000100005&script=sci_arttext