

tions was assessed by ELISA and erythrocyte acetylcholinesterase activity determined by a spectrophotometric method, and erythrocyte membrane fluidity quantified by fluorescence anisotropy.

After telepathy session the following rabbits blood parameters levels were obtained: free plasma cortisol was 3.36 ± 0.60 ng/mL; erythrocyte AChE enzyme activity was 67.5 ± 20.5 U/min/mg Hb, and the erythrocyte membrane fluidity was assed at tree levels with three fluorescent probes namely HC, TMA-DPH, and DPH and the obtained values were: for the superficial external site (labelled with HC) 0.435 ± 0.060 , for the hydrophilic site (labelled with TMA—DPH) 0.322 ± 0.011 and for the hydrophobic region (labelled with DPH) 0.313 ± 0.026 .

The values of the red blood cell parameters as well as of the free plasma cortisol obtained with rabbit submitted to telepathy communication needed to be compared with those obtained with rabbits free of telepathy session in order to have biochemical markers of rabbits mental communication.

Título/Title: *“Changes in Conscious Awareness during Autobiographical Memory and Spontaneous Self-paced movement: two tests of the “Dynamic Core Model” of consciousness”*

Instituição/Institution: *Imperial College Faculty of Medicine, Department of Cognitive Neuroscience & Behaviour, London – UK*

Duração prevista/Estimated duration: *2003/03 - 2004/01*

Investigadores/Researchers: *Dr. Adrian Burgess, Dr. Nicholas Cooper*

Abstract:

Edelman & Tononi (2000) have recently proposed a model of consciousness called the Dynamic Core Hypothesis. This states that consciousness is characterised by specific, transient patterns of connectivity, referred to as ‘neural complexity’ in which some parts of the CNS are highly integrated amongst themselves but are simultaneously highly differentiated from others. Neural complexity is explicitly operationalised and can be readily measured from EEG recordings. We tested the Dynamic Core Hypothesis in two experiments.

The first experiment involved an adaptation of a paradigm first used by Benjamin Libet’s in his classical studies on voluntary movement. Libet has previously shown that, prior to movement, there are observable

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changes in the EEG (i.e. the Bereitschaftspotential) that start more than 500ms before the subject consciously makes the decision to move. We hypothesised that if the Dynamic Core Hypothesis is correct, then there should be a change in neural complexity at the time that the participant consciously decides to move and not when the Bereitschaftspotential is first observed or when the participant moves. EEG was recorded from 21 healthy participants while they made a series of self-paced finger movements and recorded the time at which they decided to move using a Wundt Clock. The EEG recorded was used to calculate the neural complexity at 50ms intervals from 2000ms prior to movement to 1000ms afterwards. As predicted by the Dynamic Core Hypothesis, in the gamma and theta frequency ranges, there was a significant correlation between the timing of the change in neural complexity and the timing of the intention to move. Contrary to the Dynamic Core Hypothesis, however, the intention to move was associated with a decrease in neural complexity.

The second experiment involved measuring neural complexity around the time of the recollection of specific autobiographical memories. Using similar EEG methods to experiment 1, it was found that, consistent with the Dynamic Core Hypothesis, neural complexity in the theta frequency range was higher around the time of recollection than during a matched control interval.

The main conclusion from these findings is that although neural complexity, as measured by the EEG, is correlated with changes in consciousness, the direction of change is not always what would be predicted from the Dynamic Core Hypothesis.

Título/Title: "Effects of distant emotions on the human enteric nervous system"

Instituição/Institution: Institute of Noetic Sciences, California - USA

Duração prevista/Estimated duration: 2003/01 - 2004/02

Investigadores/Researchers: Prof. Marilyn Schlitz, Prof. Dean Radin

Abstract:

Intuitive hunches, gut feelings and psychic impressions are intriguingly similar in that they often share a distinctly numinous sense of knowing something, typically without conscious awareness of how one knows.