

Seminar IRH-ICUB

Consciousness and Cognition: An Interdisciplinary Approach

<https://irhunibuc.wordpress.com/2016/04/05/new-seminar-consciousness-in-philosophy-and-neuroscience/>

convenor Dr. Diana Stanciu

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Date: Tuesday, 16 May 2017, 17h

Place: IRH-ICUB (1 D. Brandza Str.), conference room

Drd. Adriana Brăescu

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Adriana Brăescu is a Biologist involved in the Education reform in Romania. BSc in Biology (1994) & MD in Neurobiology (1995) – University of Bucharest. PhD student Biology, Neurosciences. Internships in Life Science Department, University of Nottingham, UK – on the influence of neurotoxins on cell membrane. Since 2003 – entrepreneur in writing, printing and publishing research works. Since 2006 – cooperation with the University of Alcalá de Henares, Spain, in the field of Bionics, to develop an interdisciplinary approach of science in schools. Member of REMCE – Red de Estructuras de Movilidad para Ciudades Eficientes (mobility structures for the efficient city network: energy and art) – European network of professionals interested in implementing natural models in designing modern cities. Since 2013 – president of Re-Design ngo, to promote a change of paradigm in Education by switching from a Cartesian to a Holistic level. She develops holistic courses – a mix of science, philosophy, history and art, to provide a comprehensive approach of knowledge. „Nowadays, the most effective way to boost learning and understanding is to swap the approach – from general to particular, from the whole to its manifestations. Studying vision, for example, means not only the anatomy of the eye, but optics (lenses), reflection / refraction, electromagnetic fields and spectrums, biochemistry, and so on”.

Quantum Biology - Truth or Dare in Cognition

When we say “quantum”, we have to switch our thinking from macroscopic scales of time/space and temperature to quantum scales, to concepts like “entanglement”, “tunneling”, “superposition” and “close to 0 K” temperatures – most of them pretty impossible to grasp for the human mind, actually... The macroscopic quantum physical phenomena (the Bose-Einstein condensate) are characterized by special conditions – definitely not fulfilled in the brain, too hot for quantum processing. Considering the basic unit of information processing – the neuron – it is clear that a neuron cannot be simultaneously in two states – firing and non-firing (the equivalent of superposition). Quantum cognition researchers suggest there is a superposition – of mental states, created by the activity of complex neural networks that can produce effects which are formally described as interference (of probabilities) and entanglement. The same researchers do not try to create concrete models of quantum (-like) representation of information in the brain, as long as quantum realm is – most of it – a mathematical / theoretical approach of probabilities.