BALÁZS GULYÁS

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Balázs Gulyás is a Professor in Lee Kong Chian School of Medicine, Nanyang Technological University. He spent most of his scientific career at the Karolinska Institute, Stockholm, Sweden, where he is still a tenured professor in the Psychiatry Section of the Department of Clinical Neuroscience. Parallel with studying medicine at Semmelweis University Budapest, he also studied physics at the Eötvös Loránd University, Budapest, Hungary. After obtaining his MD degree in 1981, he studies philosophy (BA and MA in 1982 and 1984) at the Higher Institute for Philosophy of the Catholic University of Leuven, Belgium. Following his doctoral studies in neurobiology at the same university, in 1988 he obtained his PhD in Leuven. He pursued his post doctoral studies at the Department of Clinical Neurophysiology of the Karolinska Institute in Stockholm and at the Department of Experimental Psychology at the University of Oxford.

Balázs Gulyás has made fundamental contributions to the field of functional brain mapping with positron emission tomography (PET), with special regard to the localisation of cortical areas in the human brain related to visual perceptual functions, visual memory and imagery, olfactory and pheromone-sense functions. During the past years his research focused on molecular neuroimaging with PET, with special regard to neurological and psychiatric diseases and their “humanised” small animal disease models, with an eye on developing novel diagnostic and therapeutic approaches.

Prof Gulyás has published nine books, written over 35 book chapters and contributed to over 190 research papers in peer reviewed scientific journals. He is a member of Academia Europaea (The Academy of Europe), the Hungarian Academy of Sciences and the Royal Belgian Academy of Medical Sciences. He is the founder of the World Science Forum series (www.sciforum.hu).

Emergent Evolutionism and the Brain-mind Problem

The human brain is the most complex system, known to us, in the Universe. Its emergence from its physical, chemical, biochemical, biological endorsement is a mystery. The understanding of this conundrum has been a challenge for philosophy and science for over millennia.

Despite the tremendous efforts of our days’ neuroscience research, some basic questions about the nature of research still need clarification and require the interplay between philosophy, mathematics, neuroscience and other disciplines

(e.g. the Gödel paradigm: can we understand our brains by using our brains? or the Borges map paradigm: should a perfect map of a country be at least as extensive as the covered area of the country itself?), followed by more intricate questions about the embeddedness of the human brain is its physical-chemical-biological background. And, naturally, the main challenges are all related to the explanation of the emergent properties of the human brain: are these emergent properties part of a larger “emergent pattern” in the Universe or they are limited only to the emergence of the human brain or there is no emergence at all.

Whereas the talk will enlist a wide array of questions, the audience will receive no satisfactory answers…