

*Die philosophischen Grundlagen der Neurowissenschaften* (Philosophical Foundations of Neuroscience), Wissenschaftliche Buchgesellschaft, Darmstadt 2010, 565 pp.

The present book is a collaboration of a philosopher and a neuroscientist with the declared aim to analyze the conceptual foundations of the cognitive neurosciences and their logical relationships to advance neuroscience.

Written from the perspective of the analytical philosophy of mind, they mainly deal with the used terms and criticize many scientists for their confused vocabulary and state that many of the philosophical problems mentioned by them are a result of this confusion. In their opinion, many important neuroscientists commit a mereological fallacy by arguing that the brain does several things which are normally reserved for sentient beings like interpreting (Edelman), believing (Crick), knowing (Blakemore) or deciding (Damasio) etc. This mereological fallacy is the basis for many philosophical problems arising out of their research and has its roots especially in Descartes' philosophy. After thus pointing out the historical and conceptual roots of the philosophical problems in the neurosciences, in the second part, they analyze and criticize extensively human faculties like sensation and perception, cognitive and cogitative powers, emotion and volition and voluntary movement and how they are viewed by contemporary neuroscience. The third part turns to consciousness and contemporary neuroscience with the distinction between intransitive and transitive consciousness, a detailed analysis of conscious experience, mental states and qualia, different puzzles of consciousness (inter alia the relationship between physical processes and conscious experience) and self-consciousness. Finally, the authors treat methodological questions like reductionisms and their own analytical method.

This is a highly recommendable book for everyone who is interested in analytical philosophy of mind because of its scope, the clearly visible position of the authors to the many philosophical problems of neuroscience discussed and their detailed criticism of the positions of other scientists and philosophers. For other readers, it may be of interest because of the many problems and positions discussed even if they will not agree with the author's method. But even then, reading this book may provide some interesting insights and thought-provoking impulse.

(Thomas Fornet-Ponse)