

“. . . required reading for anybody interested in what neuroscience has to say about our capacity to make responsible decisions and be captains of our own destiny.” —**Daniel C. Dennett**,  
Austin B. Fletcher Professor of Philosophy, Tufts University

In 1964–1965, Hans Helmut Kornhuber and Lüder Deecke achieved a scientific breakthrough with the discovery of the Bereitschaftspotential (BP), or readiness potential. In *The Will and Its Brain*, Kornhuber and Deecke present evidence that proves we can record activity from the human brain occurring *prior* to our volitional movements or actions. Such preparatory activity is generated by specific brain regions, particularly by the supplementary motor area (SMA) of the frontal lobe, which lies on the inner surface of the brain between the hemispheres. The primary (precentral) motor cortex (MI) later becomes activated in preparing for action. Consequently, the authors discriminate between two components of the preparatory activity of the Bereitschaftspotential: an early SMA-generated BP1 and a late MI-derived BP2. Between BP1 and BP2, the intentional activity runs over the so-called motor loop via the basal ganglia. Kornhuber and Deecke discuss these and other brain processing systems while focusing on the concept of free will. They claim that we, indeed, have free will. It may not be absolutely free, but free in terms of degrees. We can take efforts to increase our degrees of freedom through self-improvement, but we can also lose degrees of freedom through self-mismanagement.



**HANS HELMUT KORNHUBER** was born in 1928 in Königsberg, Germany, and passed away in 2009. He was a brilliant neurologist known worldwide. After his release in 1949 from a Russian prisoner of war camp, he studied medicine in Munich, Göttingen, Freiburg, Heidelberg, and Basel. He was trained in clinical neurology at the Neurological University Hospital in Freiburg under Richard Jung and went to V.B. Mountcastle in Baltimore for sabbatical. In 1966, Kornhuber became full professor of neurology (founding chair) at the University of Ulm, Germany.

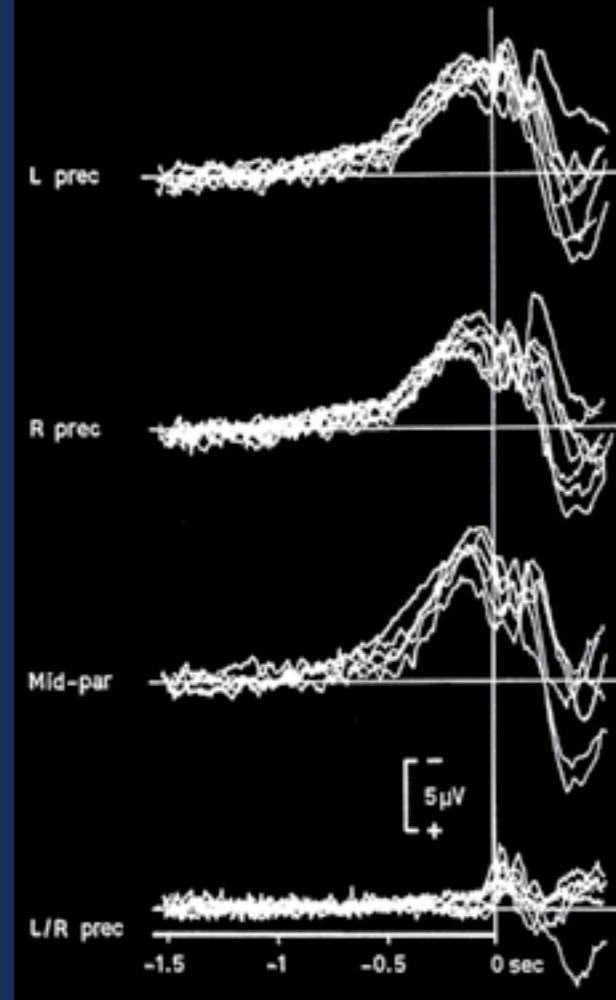


**LÜDER DEECKE** was born in 1938 in Lohe, Germany. He studied medicine at the universities of Freiburg, Hamburg, and Vienna. He began his training at the Neurological University Hospital in Freiburg under Richard Jung and subsequently trained at the University Hospital in Ulm under Hans Helmut Kornhuber. Deecke became full professor of neurology and head of the Neurological University Hospital in Vienna in 1985. In 1990, he founded and subsequently chaired the Ludwig Boltzmann Institute for Functional Brain Topography.



Kornhuber and Deecke

THE WILL AND ITS BRAIN



An Appraisal  
of Reasoned  
Free Will

# THE WILL AND ITS BRAIN

Hans Helmut Kornhuber  
and Lüder Deecke

FOREWORD BY  
DANIEL C. DENNETT