OBITUARY

PAUL DELL
(1915–1976)

On August 16th 1976 died of heart infarction at his home in Cassis near Marseille Professor Paul Dell, one of the most brilliant neurophysiologists of our time. He was born in Haguenau, Rhineland in 1915. He studied at and graduated from the Faculty of Medicine of the University of Strassbourg in France. In 1939–1940 he took part in the war as an army doctor in the Marseille regiment. Refugee from Alsace in 1940–1944 he started his work in physiology in the Department of Physiology in Lyon, headed by Professor Hermann. His first experimental interest concentrated upon the regulation of the cardiovascular system. After the war he moved to the Department of Physiology at the Faculty of Medicine in Strassbourg, where he was nominated Associate Professor. Paul Dell spent one year (1949–1950) at the Institute of Neuropsychiatry in Chicago, where he became familiar with modern electrophysiological techniques, information theory and biocybernetics. To that time dates back the beginning of his lifelong interest in brain physiology and the problem of physiological basis of consciousness and vigilance.

After his return to France he devoted himself exclusively to brain research and joined the Centre National de la Recherche Scientifique, where he soon became Research Director. For 16 years, between 1951 and 1967, he was the most inspiring and creative director of the Laboratory of Experimental and Clinical Neurophysiology at the Henri Rousselle Hospital in Paris, where he founded a modern school of neurophysiology of the brain stem reticular formation. Many outstanding French neurophysiologists like M. Bonvallet, A. Hugelin and others started their careers there as his collaborators. Numerous foreign visitors came to work at his Laboratory and had the privilege to associate with his unique personality of a great scientist and also a man irradiating a deep
humanistic understanding of life. Among them were visitors and research fellows from Poland, including the author of this obituary, inspired in neurophysiology by Professor Paul Dell, with whom he worked in Paris 20 years ago.

In 1967 Professor Paul Dell took the post of Director of the Unit of Neurobiological Research of the National Institute of Health and Medical Research (INSERM) in Marseille. Having returned to Marseille with which he had many sentimental links, Professor Dell directed and inspired a group of research workers until his premature death.

Professor Paul Dell’s main idea was the concept of a functional unity of somatic and autonomic regulatory functions of the central nervous system which can be separated only artificially. Brain stem reticular formation, according to Dell, is a neuronal network system in which both autonomic and somatic regulations interact in a most intimate and inseparable way. This idea has been like a thread leading through all his research work from its very beginning. Already in one of his early papers, he identified the central multisynaptic projections, including cortical areas, of the vagal afferent fibers conducting the information from the “milieu intérieur” of the body to the brain. His most outstanding achievement was discovering that the brain stem reticular activity is modulated by humoral influence from the “milieu intérieur”, especially by circulating adrenaline and noradrenaline and blood pressure changes. He discovered their EEG arousal effects. His intuitive idea of a key position of the central catecholamines for brain arousal was original and born years before the rapid development of the knowledge of central catecholaminergic neurons which we now possess. Later, Professor Paul Dell found that an increased activity of the brain stem reticular formation brings into play negative feedback systems which oppose and limit a too intense arousal. Much of his recent works and interest was devoted to the analysis of these systems, especially to the reflex mechanisms synchronizing EEG activity.

He developed his early discovery of EEG synchronizing effect of the arterial baroreceptor stimulation and proved that the stimulation of big vagal afferent fibers may induce full picture of EEG sleep including paradoxical phase in “encephale isolé” cats. One of his last papers was devoted to the mechanism of sleep considered in the aspect of a modulatory influence of the “milieu intérieur” and basic drives of the body upon the brain activity.

Professor Paul Dell was for many years an active and inspiring personality in many international bodies on which he served, especially in the International Brain Research Organization (IBRO) where he held the post of executive secretary. For many years he was a consultant of
UNESCO for the programme of interdisciplinary research on the brain and the co-editor of the international journal *Experimental Brain Research*.

Various occupations of his very active and busy life, and his numerous obligations to international neurophysiological organizations delayed his visit to Poland where he had many friends. Death met him only a month before his first long-planned and expected visit. His demise was a great shock to all who knew and admired him.

*Andrzej Trzebski, Warsaw*