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Preface

The Brny Society is an interdisciplinary scientific panel founded in 1960 on the initiative of the late C.S. Hallpike and C.O. Nylen to the memory of Robert Brny, who was awarded the Nobel prize in 1917 for his outstanding research in the field of neuro-otology. The founders of the Brny Society aimed at increasing contacts between scientists in vestibular research because at that time relatively few basic scientists and clinicians took an interest in this particular field of neuroscience. Since the beginning of space exploration medical problems concerned with space and weightlessness and hence the interest in the physiology and pathophysiology of the vestibular system have become more and more important. Vestibular research is no longer a restricted area of otology, covered by experienced clinicians with a scientific interest in the function of the semicircular canals, but has become a part of the vast interdisciplinary field of central nervous system data processing.
research. In up-to-date vestibular research emphasis is laid on the vestibulo-ocular and the optokinetic reflex mechanisms, because ‘rapid progress has been made in recent years toward understanding how the C.N.S. processes visual and vestibular signals to produce eye movements and body postural responses ... and a new literature on visual-vestibular interactions is beginning to build …’ [Cohen, 1981]. This evolution demands and implies an increasing contribution from basic sciences. For these reasons topics such as visual correlates of full-field motion, natural retinal image motion, the influence of visual motion cues on postural control, input-output activity of the primate flocculus during visual-vestibular interaction, error signals subserving adaptive gain control in the primate vestibulo-ocular reflex have become fundamental problems which demand the cooperation of experts like the neurophysiologist, ophthalmologist, neurologist, psychologist and otologist. At present it is practically impossible to follow or digest the vast information produced in the laboratories of basic science institutions and of aeronautic as well as space medicine. This situation, however, implies the danger that the clinician is no longer informed about recent advances in vestibular research which are relevant to his understanding of clinical symptoms of a vestibular disorder. On the other hand, there is also a certain danger that basic research gradually follows its own line without having any concern with problems of clinical relevance, becoming more and more a scientific 'l'art pour l'art' activity.

Planning the 8th extraordinary meeting of the Brny Society in Basel, we had in mind to organize a symposium on 'neurophysiological and clinical aspects of vestibular disorders' because we wanted an interdisciplinary discussion not only between the representatives of various medical specialties but also principally between the open-minded scientist from the laboratory and the scientifically minded clinician. For these reasons main topics of general and mutual interest have been chosen and they were elucidated during the meeting both from a theoretical and clinical angle. The present volume is an attempt to give a state of the art review on some interdisciplinary topical problems in experimental and clinical vestibular research.

Basel, July 1982 C.R. Pfaltz

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