

PREFACE

I have long admired the ingenuity and versatility of Dr. Joshua Rosett in applying new methods to biological problems. It was with great interest, therefore, that I first heard of his technique for mapping out the association fiber systems of the human cortex. He described his plan of work at a meeting of the Program Committee of the Association for Research in Nervous and Mental Disease in December, 1929. The committee, of which I was chairman, approved it, and urged Dr. Rosett to continue work and report progress at the next meeting of the Association in December, 1930, when the subject of discussion was to be "The Convulsive State." Obviously such an extensive and meticulous research could not be hurried, so it was at a meeting of the American Neurological Association in May, 1931, that the first (preliminary) report was read, followed a year later by a second report. The following pages present in detail a great deal of investigative work, but, as the author modestly states, this is only a start that must be expanded and corroborated.

At first glance it might seem a long step from anatomical studies of intercortical connections to the cause of convulsions. Most investigators agree, however, that epileptic convulsions usually originate in some part of the cerebral cortex, and spread rapidly to involve large portions of the brain. This spread is an important part of the convulsion, since it determines the way in which the abnormal discharge will reveal itself—whether as muscular jerkings due to involvement of the precentral cortex, as paresthesia due to involvement of the postcentral cortex, or as scotoma due to involvement of the occipital cortex—to mention three of the many possibilities. The intercortical fiber systems are the pathways along which these epileptic discharges may spread in the cortical phase of the convulsion.

Apart from this special interest, however, it is of great importance to know accurately the anatomy of the cerebral cortex from all aspects. Only by understanding the fiber connections between gyri can the relationship of the recently discovered different areas of cortical cyto-architecture be understood, and upon these relationships de-

pende much of the cerebral function. Upon a correct understanding of cerebral localization, depends our knowledge of how the brain functions. The brain is not an organ, it is a hundred organs rolled into one. The intricacies of its anatomy and physiology are as yet only schematically and fragmentarily understood. Upon the conviction that one day this form and function will be thoroughly known, rests our hope of at last understanding the biological basis of psychology; for no sound psychologist doubts that the brain is the organ of the mind. Dr. Rosett's work is an important step forward toward this goal.

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