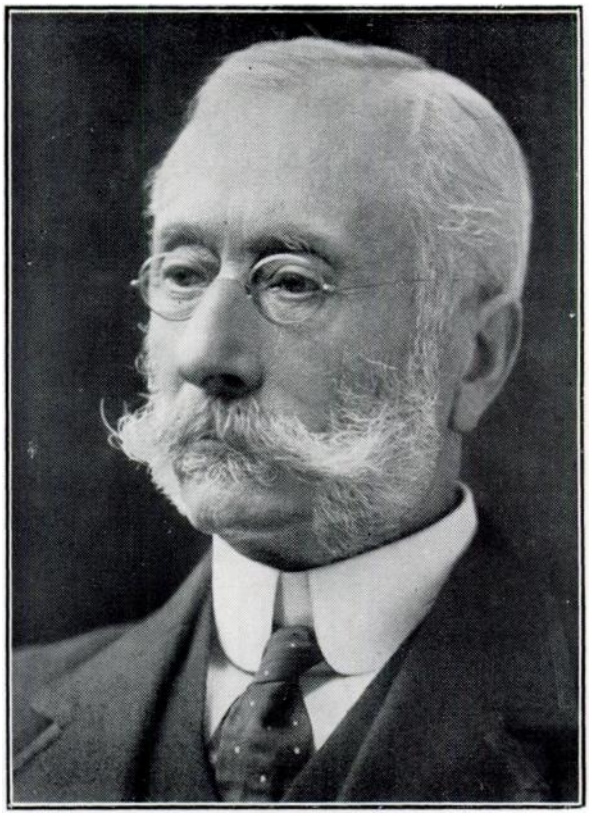

SIR DAVID FERRIER, F.R.S.

Born 1843.
Died March 19, 1928.

Honorary Member
since 1895.

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SIR DAVID FERRIER, LL.D., Sc.D., M.D., F.R.C.P., F.R.S. 1843–1928.

By the death of Sir David Ferrier, which occurred in the early part of this year, we have lost the last survivor of that galaxy of great men who founded the British School of Neurology, and made the name of the National Hospital, Queen Square, famous throughout the world.

Ferrier was born at Woodside, near Aberdeen, in 1843, and died on March 19, 1928, at York House, Kensington, in his 86th year. He was educated at the Grammar School of Aberdeen, and while at school gained, in open competition from the whole of Scotland, a bursary which enabled him to enter the University of Aberdeen in 1859. After a brilliant career as a student he graduated as Master of Arts in 1863 with first-class honours in the humanities and philosophy, and further distinguished himself by winning the Ferguson Scholarship—a prize open to graduates of all four Scottish Universities.

During his University career at Aberdeen Ferrier came in contact with Alexander Bain, the Professor of Logic, and largely through his influence became interested in the study of psychology, and thus it was that in 1864 Ferrier went to Heidelberg to pursue his studies in this subject. During his stay at Heidelberg he decided to devote himself to medicine and returning to Scotland in 1865 commenced his medical studies at the University of Edinburgh, where he graduated in 1868. During his undergraduate career in Edinburgh his brilliance again attracted attention, and Laycock, who was then Professor of the Practice of Physic in the University, appointed Ferrier his assistant.

Ferrier would doubtless have achieved fame and brought honour to his University had he remained in Edinburgh, but he had of necessity to supplement his income by coaching, and he soon

realized the limitations which this work was placing upon him. He therefore decided to resign his position under Laycock and take up general practice.

He became assistant to Dr. William Edmund Image, an able and cultured man, who was a Fellow of the Royal College of Surgeons, and practised at Bury St. Edmunds. He was fortunate in being associated with a man of Dr. Image's insight, for Image soon realized that Ferrier's abilities called for a wider scope, and he encouraged him to devote himself to research, thus making it possible for Ferrier to undertake a research upon the "Comparative Anatomy of the Corpora Quadrigemina." Ferrier presented this as a thesis for his M.D. Degree in 1870, and was awarded a Gold Medal. In the same year he came to London to work under Prof. Burdon Sanderson, who was then Professor-Superintendent of the Brown Institution. When Burdon Sanderson resigned the Lectureship in Physiology at the Middlesex Hospital he was succeeded by Ferrier, who, however, relinquished this post shortly afterwards, and in 1871 began his long association with the Medical School of King's College Hospital, where he was appointed Demonstrator in Physiology. In 1872 he was elected to the post of Lecturer on Medical Jurisprudence, and soon after succeeded Prof. Guy in the chair of Forensic Medicine. This post Ferrier held until 1889, when he was appointed Professor of Neuropathology at King's College Hospital, a new chair having been specially created in his honour.

Ferrier commenced his experimental work on cerebral localization in 1873, and during the next three years he worked with almost inconceivable energy and concentration on his researches on cerebral localization. He was able, in these three years, to publish fully the results of his experimental work, his first paper, under the title of "Experimental Researches in Cerebral Physiology and Pathology" appearing in the *Reports of the West Riding Asylum*. At various intervals during 1874 and 1875 he made known further results, and in the latter year he delivered the Croonian Lectures before the Royal Society on "The Localization of Function in the Brain."

In 1876 he published the first edition of his book, *The Functions of the Brain*. Previous to the publication of this work the results of Ferrier's researches had attracted the attention chiefly of those interested in the subject, but on its advent the attention of the medical world was immediately focused upon the subject and upon Ferrier. It is easy to trace the influence which the publication of this book had upon physiology and medicine, for when, ten years later, Ferrier published a second edition, the book was enlarged

and practically rewritten, the new matter incorporated being a striking testimony to the stimulus which this work had exerted both upon physiology and neurology.

Ferrier continued research work in the neurological laboratory of King's College Hospital up till 1898. It was characteristic of him that he should have continued this work for over twenty years, during which time his days were fully occupied with hospital duties and the heavy burden of a large and ever-increasing practice.

Amongst his later publications were: The Croonian Lectures on *Cerebral Localization*, delivered before the Royal College of Physicians in 1890, the Harveian Oration on *The Heart and Nervous System* in 1902, the Lumleian Lectures on *Tabes Dorsalis* in 1906, and his article on "The Regional Diagnosis of Cerebral Disease" which he contributed to Allbutt and Rolleston's *System of Medicine*.

It is hard to realize at the present time the difficulties which Ferrier had to overcome, and it is only when we read his scientific writings that we can fully appreciate the magnitude of his labours. His experimental work was subjected to criticism from physiologists and clinicians, and objections were raised as to the technique which he employed. With infinite patience he dealt seriatim with all objections advanced and was scrupulously fair in the presentation of each problem. Whether engaged in disposing of preconceived theories or in developing his own deductions and inferences, his method was always calm and logical and backed up by the citation of numerous facts, and his favourite quotation from G. H. Lewes, "Indeed every discovery is a verified hypothesis, and there is no discovery until verification has been gained; up to this point it was a guess which may have been erroneous," typifies the spirit in which his experimental work was undertaken.

Whatever mistakes Ferrier made—and they were few—the fact remains that subsequent researches have not fundamentally altered the conclusions he arrived at.

Ferrier commenced his hospital practice in 1873, when he was appointed Assistant Physician to the West London Hospital. His name, however, will always be associated with two hospitals—King's College Hospital and the National Hospital for the Paralysed and Epileptic. In both he successively filled the posts of Assistant Physician, Physician and Consulting Physician.

Ferrier was appointed to the staff of the National Hospital in 1880, and it is doubtful whether at any one time a group of such brilliant men have been associated together on the staff of one hospital, each in his own way adding a special lustre, and all combining for the advancement of neurology. It is not out of place to recall their names: Hughlings Jackson, by general consent

"The Master," Thomas Buzzard, Bastian, Gowers, Ferrier and Horsley.

To his house physicians and those who were associated with him in his work Ferrier was loyal, generous in appreciation of their efforts, and kindly and helpful with his criticism. His teaching was characteristically practical and his exposition clear and concise.

He took a personal interest in every patient in his wards. His method of examination gave confidence, for he was quick to grasp the essential features and signs in each case and to make up his mind as to the diagnosis. He was specially helpful in the treatment and management of the various types of cases. He was ever ready to test any new drug or method of treatment, provided he was satisfied that by so doing he was not exposing the patient to any risk. He was always a psychologist, and it was to this, and his innate common sense, that his great success in the treatment of many difficult cases must be attributed. Ferrier was greatly interested in hypnotism, and although he did not practise it himself, he did not hesitate to employ it in cases where he thought it suitable.

Ferrier's work met with speedy recognition, and in 1876 he was elected a Fellow of the Royal Society and of the Royal College of Physicians, of which later he was a most distinguished and active member, and served as examiner, councillor, censor and senior censor.

He was one of the founders of *Brain* (1878), and was President of the Neurological Society (1894), and of the Medical Society of London (1913), in which year, as the *doyen* of British Neurology, he was President of the Section of Neuropathology at the International Medical Congress held in London.

During his career he was the recipient of many honours: He was made Laureate of the French Institute in 1878 and was awarded the Marshall Hall Prize in 1883, the Baly Medal in 1887, the Royal Medal of the Royal Society in 1890, the Cameron Prize in 1891, and the Moxon Medal in 1912. He was knighted in 1911, and received the Hon. Sc.D. of Cambridge in 1914 and the Hon. LL.D. of Birmingham in 1927.

When we review Ferrier's career and consider the part which he played in one of the greatest advances in medical science, we recognize at once that his inherent qualities were those essential for the successful fulfilment of the work he undertook. Gifted with a brilliant mind, a sound judgment, a unique power of concentration. By nature an enthusiast and full of energy, he was a man of dogged determination, and, in addition, possessed the ability

to operate and to develop a sound surgical technique. Further, his training—the breadth of this general education and the trend of his special studies—was exactly what was needed to fit him for his life's work.

It is interesting to note how, step by step, Ferrier arrived at the position from which he was to start his great research; everything seemed to conspire to bring him to London, where he became associated with Hughlings Jackson. Hughlings Jackson and Ferrier were complementary to each other. Jackson—the thinker—had evolved, by reflection upon clinical observations he had made in cases of cerebral tumour, a theoretical conception of the functions of the motor cortex. The truth of Jackson's hypothesis could only be established by experimental investigation, and this inspired Ferrier to commence his researches. During their long association Ferrier and Jackson held each other in mutual esteem and affection. In dedicating his book, *The Functions of the Brain*, to Hughlings Jackson, Ferrier pays him this tribute: "To Dr. Hughlings Jackson, who, from the clinical and pathological standpoint, anticipated many of the more important results of recent experimental investigations into the functions of the cerebral hemispheres."

The publication of Jackson's theories in the 'sixties had already led Fritsch and Hitzig to undertake experimental investigation on the cerebral cortex. The results of their researches were published in 1870. They demonstrated the existence of certain centres in the brain which could be stimulated electrically, and their discovery of the electrical excitability of the brain furnished experimental physiologists with a new method by which to explore fresh fields. Ferrier fully realized the possibilities which the new method of experimental research instituted by Fritsch and Hitzig had opened up, and always acknowledged his indebtedness to them. He improved upon their method and technique, and in his experiments used the Faradic current. During the three years he was engaged on his research he succeeded in mapping out, not only cortical centres for movement, but also certain centres of the special senses.

It is difficult to appraise the value of Ferrier's work in terms of modern neurology, so much has been added to the foundations he laid. But it is abundantly clear (1) that Ferrier's work, which was essentially of a pioneer character, did of itself first place the localization of function in the brain on a sure footing; (2) that his correlation of clinical and experimental investigations supplied a basis upon which all neurologists could work; and (3) that to his discoveries and the success which attended his experimental operations we owe the conception and birth of cerebral surgery.

Those who knew Ferrier will remember him as a short, slim, dapper man, with a keen, intelligent face and penetrating eyes. What impressed everyone was the alertness and the aliveness of the man. Gifted with an excellent memory, an exceptionally quick and acquisitive brain, he was always seeking after new information and fresh facts. He formed and held strong opinions, but was never overbearing, nor did he bring personal feelings into his controversies. He had a generous and kindly nature, and was full of human sympathy.

Apart from medicine Ferrier had many and varied interests. He was a classical scholar and a lover of art, especially pictures. He could talk on almost any subject, and had a peculiar faculty of finding out and remembering the special hobbies of all with whom he came in contact. He enjoyed his holidays, and for many years his chief recreation was sea-fishing, at which he was an expert. When he retired from active practice he seized the opportunity which his leisure gave him of gratifying his interest in many subjects, more especially those which were related to medicine and science. Ferrier never grew old, and although he died in his 86th year, he retained his sprightliness and mental vigour up to the onset of his last illness.

T. GRAINGER STEWART.