



SIR FREDERICK W. MOTT, *K.B.E.*, LL.D.Edin. (Hon.), M.D., B.S.,
F.R.C.P., F.R.S.

Born October 23, 1853.
Died June 8, 1926.

President, 1925-6.
Ordinary Member since 1896.

THE
JOURNAL OF MENTAL SCIENCE

[*Published by Authority of the Royal Medico-Psychological
Association.*]

No. 298 [NEW SERIES
No. 262.] JULY, 1926. VOL. LXXII.

SIR FREDERICK W. MOTT, *K.B.E.*, LL.D. EDIN. (HON.),
M.D., B.S., F.R.C.P., F.R.S.⁽¹⁾

WE mourn to-day the loss of a great leader in science and medicine, but we rejoice at the same time in the work that he has accomplished for science and for mankind; and it seems fitting that in this our service of commemoration we should call to mind the achievements which have not only raised him to be foremost among neurologists, but have put all humanity in his debt. Sir Frederick Mott was one of the select few who receive early their call to service in the temple of science, and who, responding to the call, are willing to sacrifice all in the pursuit of knowledge and in the fight against the ignorance and impotence which keep our world in bondage.

Mott took up research as the serious business of his life as soon as he had completed his medical studies at University College, London, in 1881, and became at once associated with a small band of workers, among whom were Horsley, Schafer and Beevor, who were actively engaged in elucidating by the experimental method the functions of the brain. The researches of these men were advancing our knowledge so rapidly that at that time neurology seemed to be a specially English science. It was probably the influence of these early associations that aroused in Mott his keen interest in the mode of working of the central nervous system and determined the direction of his life's work.

In 1883 Mott was appointed Assistant Professor of Physiology at Liverpool, but returned to London in the following year as Lecturer on Physiology at Charing Cross Hospital Medical School,

⁽¹⁾ An address written by Prof. E. H. Starling, C.M.G., D.Sc., M.D., F.R.C.P., F.R.S., and delivered by him at the Memorial Service held at the Church of St. Martin-in-the-Fields, Charing Cross, London.

a post which he held—later in conjunction with a position on the medical staff—until 1899. During this period he had to superintend the building and organization of the new laboratories in Chandos Street, but his duties as teacher, as organizer of courses, and later in charge of patients, were not allowed to interfere with the main work of his life, namely, the investigation of the functions of the central nervous system. During these years his most important contribution related to the functions of the parts of the brain concerned with vision, and this subject continued to occupy his attention up to the end of his life, and to undergo at his hands continuous development. The localization of the sense of vision in the brain necessarily led on to the consideration of the parts of the brain involved in the higher visual processes, and the association of these with the impressions from other sense-organs and with the motor reactions which ensued. He was one of the first to appreciate the great part which has been taken in the evolution of the human brain and of the intellectual powers of man by the development of binocular vision, and the correlation between vision and the movements of the hands which became possible when the forelimbs were no longer required for locomotion. Throughout this early work we see a gradual turning of Mott's attention and interest from the lower to the higher functions of the brain, and an increasing preoccupation with the brain as the organ of mind and with the dependence of the higher mental processes on the structural and functional conditions of the brain itself. His growing interest in disordered conditions of mind was probably stimulated by his appointment as Physician at Charing Cross Hospital, and the opportunities he thus obtained of observing different forms of mental disturbance—the temporary condition of insanity due to poisons, such as alcohol, those which are certainly due to infection, and the more lasting conditions which may find their way into a general hospital before being hidden away in an asylum. Thus, when the London County Council, in 1895, created the post of Pathologist to all the asylums under their charge and built a laboratory at Claybury in which this work might be carried out, Mott was the one man in England fitted by training, temperament and achievement for the post, and when the place was offered to him he accepted it joyfully, even though it involved material sacrifice and the acquiescence in many conditions which seemed irksome. But to him it was the opportunity he desired, since it enabled him in future to devote the whole of his attention to the investigation of the causes of insanity. The main questions which he had to study had long been in his mind: What parts in the production of this disorder were played respectively by heredity and by environment,

or, as he generally chose to say, by nature and by nurture? What forms were due to infection? What to poisons introduced from without or produced in the body itself as the result of disordered function of its various organs, especially those concerned with internal secretion? And finally, what forms had their origin in faulty development? In this way he might learn what kinds of insanity were preventable and what could be cured, while light might be thrown on methods of treatment of every type, whether preventable or unavoidable.

The record of Mott's chief work for more than a quarter of a century, together with that of the younger men working under his inspiration, is in the *Archives of Neurology*. Much of the research carried out, first at Claybury, and later in the laboratory of the Maudsley Hospital for Mental Diseases at Denmark Hill, lays the foundation on which other workers must build. I would here only summarize briefly those researches which form notable achievements in the science of medicine and permanent gains to our powers of control of mental disorders.

The first, and probably greatest, of these was the definite proof that *general paralysis of the insane* was due to *infection* and was part of a general disease, and had nothing to do with nervous inheritance or with the strains and stresses of an over-active life. In this way was removed the disability previously attaching to descendants of a general paralytic, and the disease itself entered into the domain of those which are preventable, and possibly, with further research, susceptible of cure. For this disease, as for another—locomotor ataxy—*infective* origin had already been guessed, but it was Mott's merit to have for the first time put the matter beyond further question.

Another subject which was forced on his attention in consequence of his close association with the work of the asylums was the prevalence of what was known as "asylum dysentery." Investigations on this disease carried out under Mott's direction convinced him that it was not a necessary condition of asylum life, but was due to the neglect—sometimes unavoidable—of precautions which should be taken in dealing with any case of infective disease. He pointed out that the conditions of its spread were identical with those of typhoid, and the introduction of the measures suggested by him led at once to a marked diminution of the prevalence of this disorder.

The outbreak of the war brought a further problem for solution, namely, that of shell-shock, and patients suffering from this disorder were collected under Mott's care, so that he had the fullest opportunity for their investigation. A careful study, pathological and clinical, enabled him to divide the cases into two categories—those in which there was an actual mechanical injury due to the

physical effects of an explosion, and those in which the cause of the disorder lay on the psychical or emotional plane, and the disease represented a functional breakdown of a nervous system not sufficiently stable or healthy to withstand the stresses and strains to which men were subjected in the perils of the trenches. This delimitation of the causes of shell-shock rendered it possible to decide not only as to the prognosis of any given case, but also as to the best methods of treatment.

Since the war Mott's chief attention had been given to the question of the insanity of youth, known as dementia præcox. In his masterly papers on this subject he has shown beyond cavil that we are dealing here with a disorder of development, in which that great source of the chemical factors influencing development, namely, the sexual glands, and the highest and most lately developed parts of the brain undergo simultaneous retrogression and decay.

Time does not allow me to deal adequately with many of Mott's other activities, both within and outside his work. I would only mention his masterly analysis of the part played by alcohol in the causation of insanity, his examination of the influence of the internal secretions on the development of the mental functions, his advocacy of mental hospitals for the treatment of early cases of disordered mind, his interest in eugenics and the reduction of feeble-minded stocks. Inspired by his keen interest in music, he made notable contributions to the physiology of speech and song, and the value of this work to musicians was signaled by his election as President of the Society of English Singers.

Nor have I said anything of the man himself. His personality is too fresh in our minds to need calling to remembrance, but his scientific achievements would have been impossible but for certain qualities inherent in his character. Single-hearted in his search after knowledge and in his devotion to science, he was free from that prejudice and that type of vanity which makes a man adhere to some view he has previously associated with himself. It is natural, therefore, that his advice, not only on questions connected with the central nervous system, but on all points of difficulty, scientific and otherwise, was greatly sought by his colleagues. There was no man freer from envy or fuller of generous admiration for the work of other men. So our prevailing feeling to-day must be thankfulness for his life and his work, and though we regret our loss, we must not sorrow overmuch that he has laid down his task and secured rest from his labours while in the plenitude of his powers and with his mental vision still undimmed, at a moment when the main objects which he had set himself to carry out were in full course of accomplishment.