SIR MICHAEL FOSTER.

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On March the 8th we celebrate the centenary of the birth of Sir Michael Foster. It is well that we who enjoy the fruits of his labours should remind ourselves of what we owe to his remarkable genius, for in a very true sense, he was a parent of modern biology and medicine. The fact that he, more than any other, was responsible for the pre-eminence of Cambridge in Biological Science in later years must be looked upon as being simply fortunate for Cambridge; for he was not originally a graduate of that University and would undoubtedly have brought lustre to any institution which had sufficient insight to secure his services.

After graduation in Arts and Medicine in University College, London, he spent two or three years at laboratory work at home and in Paris and while it is true he settled down in 1861 to practice with his father at Huntingdon, there can be little doubt but that during that period he had received the "infection of science" which eventually got the better of him and caused him to abandon practice six years later for Physiology. The man undoubtedly responsible for this infection was William Sharpey, Professor of Physiology at University College, a Scot whose work in Edinburgh seems to have passed unappreciated but who later by common assent became the Father of British Physiology, since his three pupils Foster, Burdon Sanderson and Schafer and their pupils have spread the true spirit of physiological enquiry throughout the English-speaking world.

Foster was the favourite pupil of Sharpey and with him made a study of methods of teaching in the then flourishing German Universities. He also became acquainted with Huxley and established with him a friendship which had a profound influence on Foster's subsequent career. Trinity College, Cambridge, in advance of the University but full of scientific tradition, saw early the gradual rise of the new biological sciences in which hitherto it had taken no material part and founded a praelectorship, to which Foster was invited on the advice of Huxley. In due course, the University founded first a lectureship and then a chair. Foster transformed the methods of teaching Biological Science, extended the scope of the subject and implanted new ideals, the keystone of his teaching being the insistence on first-hand knowledge as far as possible. Practical work in Physiology had been begun earlier in Edinburgh by Hughes Bennett, but the latter being partly a clinician, never had the same influence as Foster.

The original researches of Foster were good but not in any sense striking: rather they were sufficient to make him fully appreciative of the difficulties of research, of the type of person who might be most successful in such work and of the necessity for adequate leisure for its pursuit. It is this more than anything else which has made modern Cambridge. How often the average medical School looks upon its full-time teacher as a wheel in a machine for the making of practitioners. Gradually under Foster's influence, Botany, Zoology and Physiology became recognizable as separate sciences and the fame of the researches of the brilliant, hard-working zealots rapidly brought the medical School at Cambridge a prosperity it had not hitherto known.

Foster enjoyed not only the confidence of his colleagues in Cambridge, but of Biologists throughout the world. He, more than any other, was responsible for the foundation of the Physiological Society and for the First International Congress of Physiology. Hitherto Physiology had been a branch of Zoology or of Medicine. His own Secretaryship of the Royal Society from 1881-1903 and the Presidency of his pupil Sherrington many years later may be looked upon as indicating the establishment of Physiology as an equal of the older sciences. There can be little doubt that he owed much to great geniality and personal qualities, which made him so acceptable to his colleagues in the other subjects. These qualities found outlet in the vast number of activities in which science was related to the public. He did much to convince the government of his day that science could be of great value to the public and such diverse subjects as vaccination, tuberculosis, military education, malaria and meteorology claimed his attention.

During his own day, Medicine as a whole did not see the value of his work. It had been occupied with the great advances in Bacteriology and Pathology. It had become the fashion of the physicians to jeer at the new Physiology, much of which appeared of no practical value. From addresses given by distinguished men of the time, it is easy to find examples of subjects then taught which have since come into almost daily medical use. Since the War, the basic work of Foster, backed by the power and reputation of Cambridge in general scientific circles in building up the new science, has received full recognition until now we see Medicine and Surgery claiming as their own methods, of which many are the fruits of patient and ill-remunerated toil of the early pure Physiologists. The great theme of Foster was to train medical students in the methods of science, whether or not that training was of immediate value in medicine, on the ground that the training as such was of value in developing the power of accurate and critical observation. It must of course be remembered that at that time Medicine, although rich in methods of observation, was sadly lacking in scientific method.

With the passing of the years and the appreciation of the benefits which have accrued from the methods of Foster, we now find that many institutions have copied these methods. They flourish in the larger London schools, but there are, alas, still many schools in the kingdom which do not give to the junior members of their staffs the facilities and leisure which are so essential for constructive, thoughtful research, without which teaching becomes soulless and ceases to inspire. Men educated in such institutions cease to be capable of taking their part in the advances; they become the copyists of the profession. But those whose fortune it is to be associated with medical schools which encourage the spirit of scientific enquiry must ever cherish the memory of that most remarkable man, to whom they owe so much—Michael Foster.