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international quarantine, biological standardization and other subjects. Its organization operates in six regions of the globe. As was inevitable, it has encountered difficulties and set-backs, but the record shows that it is steadily moving towards its objective, which is the attainment by all peoples of the highest possible level of health.

In the checking of epidemics WHO has been endowed with the triumphs of recent medical research for preventing and treating disease, unknown to earlier international organizations. Here may be mentioned especially the antibiotics, immunization against bacterial and virus diseases and the insecticides against vectors of malaria, typhus, etc. The chapters on malaria, virus diseases, tuberculosis, nutrition and atomic energy in relation to health are of special interest.

In this important book, well illustrated and produced, WHO has given a commendable account of faithful stewardship during its ten years of existence.

ARTHUR S. MACNALTY

Alexander Gordon, M.D., of Aberdeen. IAN A. PORTER, M.B., CH.B. Edinburgh: Oliver & Boyd, 1958; pp. xii+92. Illustrated. 12s. 6d.

It is commonly supposed that evidence pointing to the transmission of an infectious agent to women in labour by those attending their confinements was first brought to light by Oliver Wendell Holmes of Boston, U.S.A., and, a few years later, by Semmelweis of Vienna.

But in fact the credit for recognition of this important landmark in obstetrics would seem to belong rather to Alexander Gordon, who practised in Aberdeen fifty years before Holmes produced his classical paper (1843)—in which, incidentally, he frankly acknowledged Gordon's earlier work.

Dr. Ian Porter has made a valuable contribution to the history of obstetrics by reviewing the scanty knowledge (and the speculations) about puerperal fever before Gordon's time: by telling us the circumstances in which Gordon made his observations and also a good deal that has not been known hitherto about Gordon himself.

Briefly the story of his puerperal fever work may be summarized as follows: he studied some seventy-seven cases (twenty-eight fatal) occurring in a period of fourteen months in and around Aberdeen, most of them in their own homes. In many of them puerperal fever had followed delivery by a doctor (sometimes Gordon himself) or a midwife who had been in contact with another febrile obstetric case. It was on this association, so often repeated, that Gordon based his hypothesis. Erysipelas complicated the puerperal fever in some cases, and it was unusually prevalent in non-obstetric patients during the same period. Recovery, in early cases of puerperal fever, sometimes followed vigorous bleeding and/or purging, but even in cases so treated the mortality was high.

LEONARD COLEBROOK

Sir Charles Bell, His Life and Times. SIR GORDON GORDON-TAYLOR and E. W. WALLS. E. & S. Livingstone Ltd., 1958; pp. 288, with 50 illustrations. 42s.

Strangely enough, this is the first full-length biography of Sir Charles Bell. From the 'letters', written to his brother George and published in 1870 by Lady Bell, and from

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many biographical notices as well as from his published works (sixty-nine are listed in the bibliography), the main facts of his life and work are already familiar; nevertheless a complete and critical appraisal of so great a figure in the world of surgery will surely be welcomed by his numerous admirers.

It is indeed fortunate that the task has been undertaken by two of his very worthy followers at the Middlesex Hospital, Sir Gordon Gordon-Taylor, who is now Honorary Consultant Surgeon to that institution, and Professor E. W. Walls, who occupies the S. A. Courtauld Chair of Anatomy in the University of London at the Middlesex Hospital Medical School.

A century and more after his death [they write] Sir Charles Bell is remembered as anatomist, physiologist, surgeon, artist, and, yes, philosopher too. In each of these rôles he played a distinguished part: yet it has been said that, while he did enough to lay the foundation of a dozen reputations, he did too much to complete one . . . great as were his achievements, he might have accomplished more by concentrating his energies on one major project. [It would appear that he attempted too much in his] ceaseless toil of writing, lecturing, painting, operating and museum-building.

Charles Bell was born in Edinburgh in 1774, the son of a poor episcopalian minister. He was left fatherless at the age of five, and received most of his early education from his mother. Almost as a boy, Charles began to assist his brother John, eleven years his senior, in his School of Anatomy.

John was a good teacher and an able surgeon, and for a time the prospects seemed bright for the brothers. Owing, however, to a wordy warfare with Professor James Gregory, John abandoned anatomical teaching, although he continued to practise surgery, while Charles, whose prospects were affected by his brother's unpopularity, removed to London in 1804. At first he had a hard struggle, but he was befriended by a surgeon of fame, William Lynn, and he busied himself with his *Essays on the Anatomy of Expression in Painting*, which was well received on its publication in 1806, and was reprinted in several editions.

In 1812, Charles Bell became proprietor of the Windmill Street School of Anatomy, inaugurated by William Hunter in 1765, and thus achieved a long-cherished ambition. During the previous year he had married Marion Shaw of Ayr, whose sister was already Mrs. George Bell. George, the brother to whom the 'Letters' were addressed, was Professor of Scots Law in Edinburgh. Charles had also published privately, in an edition of only 100 copies, his *Idea of a New Anatomy of the Brain*, which contained the germ of his revolutionary opinions on the nervous system, soon to be extended by his well-known researches, the basis of his important work on *The Nervous System of the Human Body*, first published in 1824.

When he was appointed Surgeon to the Middlesex Hospital in 1825, Charles Bell decided to lay aside the teaching of anatomy, and it was then that he sold his museum to the Royal College of Surgeons of Edinburgh for £3,000, 'surely the greatest bargain ever struck by the College in its long history'. Of course he retained his interest in anatomy, and his Bridgewater Treatise, *The Hand, its mechanism and vital endowments as evincing design*, dated 1833, may still be read with profit.

When the Chair of Surgery became vacant in Edinburgh in 1836, Sir Charles Bell was invited to occupy it, and this he did until his death six years later.

He died of angina pectoris (as it was then called) while on a visit to friends at Hallow, near Worcester, and there he lies buried. The grave, after years of neglect,

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now stands restored by the Middlesex Hospital Medical School, which owes to Sir Charles Bell its greatest debt.

In their biography of this distinguished surgeon and scientist, the authors have not been content merely to record the facts of his life and services. They have placed him in his contemporary environment, and the book has its value greatly enhanced by the account they give of other famous men of the period, in every walk of life, in a short chapter entitled 'Per orbem terrarum'. There is also a chapter on Waterloo, with extracts from Bell's diary in which he records the scene he witnessed there some eighteen days after the battle. Also, as might be expected, there is an interesting account of the founding of the Middlesex Hospital Medical School, which, like the rest of the book, will be of special interest to Middlesex men. The central and the most important chapter deals with Bell's researches on the nervous system, his 'nova anatomia cerebri humani'. On 26 November 1807 he wrote to his brother George, 'My new anatomy of the Brain occupies my head almost entirely. I hinted to you formerly that I was burning, or on the eve of a grand discovery.'

Until Bell's day, little had been added to neurology since the time of Galen, and indeed it was still believed that nerves were channels conveying a fluid to the tissues. Some progress had been made by Borelli, Glisson, von Haller and others, but Charles Bell was the first to whom it occurred that definite nerves have a definite course from the brain to the periphery, and that different nerves have quite different functions. The 'Idea', stated by Bell in 1811, has been called the Magna Charta of Neurology, although it is true that François Magendie gave a more complete demonstration of the functions of motor and sensory nerves.

The present writers give a very fair and unbiased assessment of the claims of Bell and Magendie regarding priority of discovery. It is unfortunate that the so-called Bell-Magendie controversy continues to this day. There seems to be little ground for the assertion that Magendie stole Bell's idea, and surely each of the famous scientists deserves credit for his share in the discovery. Nevertheless the relative importance of the researches of each furnishes a problem which the reader, having studied the facts, must solve for himself.

It must not be supposed that the authors have confined their attention to the details of Charles Bell's life-work. They have also given a picture of the man himself, a genial, kind-hearted man, and a man of deeply religious conviction. Richly blessed in his life's partner and in his friends, he was essentially a happy man, although he was no man of business, and it is indeed sad to recall that he died a poor man, and that his widow was awarded a Civil List pension of only a hundred pounds a year.

The main part of the book consists of seventeen chapters, within the compass of 175 pages. The remaining hundred-odd pages are devoted to twenty-four appendices, which are of absorbing interest, and which add greatly to the value of the work. The fifty illustrations are well chosen and clearly reproduced, although to the non-medical reader, and there will surely be such, Figs. 13 and 49 may seem a little lurid, if not revolting.

This excellent life of a great pioneer, placed in the proper setting of his time, should attract not only surgeons, neurologists and physiologists, for whom it is essential, but all medical men, and even a wide general audience.

It is published by the House of Livingstone, which places it on the highest level in printing and presentation: a welcome new-comer in their splendid series of medico-historical biographies.

DOUGLAS GUTHRIE