cutaneous sensibility and the *rationale* of his successful treatment of the psychoneuroses were directly due to his psychological training. So, too, his epoch-making discoveries and his views in the field of anthropology on the spread and conflict of cultures were largely due to the application of that training. Shortly before his death he was developing, as a committee member of the Industrial Fatigue Research Board, an intense interest in that youngest application of psychology, namely, to the improvement of human conditions in industrial and commercial work by the methods of experimental psychology applied to fatigue study, motion study, and vocational selection.

Unhappily, men of such wide sympathies and understanding as Rivers, combined with a devotion to scientific work, are rare. He himself recognised that "specialisation has . . . in recent years reached such a pitch that it has become a serious evil. There is even a tendency," he rightly said, "to regard with suspicion one who betrays the possession of knowledge or attainments outside a narrow circle of interests" (*Brit. Jour. of Psychol.*, vol. x., p. 184). Let his life, his wisdom, his wide interests, sympathies and attainments, and the generosity and honesty of his character, be an example to us in the common object of our meeting this week—the advancement of science.

Obituary.

PROF. F. D. BROWN.

WE regret to announce the death, on August 2, at Remuera, New Zealand, of emeritus professor Frederick Douglas Brown, at the age of seventy years. Prof. Brown began the study of chemistry in 1870, under Dr. Matthiessen, at St. Bartholomew's Hospital. On the death of Dr. Matthiessen, he continued his studies at the Royal College of Science, South Kensington and afterwards in Leipzig. On his return to England about 1876, he began research work at the London Institution with Prof. Armstrong, whom he had known at St. Bartholomew's. He then spent some time in Prof. Guthrie's laboratory and afterwards in the University Laboratory, Oxford. During this period, he was concerned in the teaching of chemistry at Cheltenham and Clifton Colleges and he also supervised the construction of the chemical laboratories in University College, Nottingham.

In 1883, Brown was appointed professor of chemistry and physics in Auckland University College, a post he held until 1914, when he came to England; but he was so upset by the conditions of the war, especially the bombing, that he gave up his intention of settling here and, in 1918, returned to the quiet of New Zealand. He did the greatest possible service to the cause of scientific education in New Zealand, where he was generally held in high esteem.

A man of original and independent, aristocratic mind but entirely unobtrusive though charming manner, firm and clear in his convictions and with a specially developed sense of accuracy and thoroughness, Brown's scientific work was of a classic character, though through force of circumstances it could not be large in amount: however, he not only made the best of the material that was at his disposal in Auckland but was also successful in inspiring those who studied under him with his own high conceptions of scientific duty. The work by which he is best known probably is that relating to fractional distillation, a subject on which he was an authority in early days; he also paid much attention to the cyanide process of extracting gold.

PROF. F. T. TROUTON, F.R.S.

AT Trinity College, Dublin, in the 'eighties of last century, there assembled under Prof. FitzGerald a small band of enthusiastic physicists of great ability and originality, brought together by a common admiration and affection for their chief. Names which will always be connected with this brilliant school of physics are Joly, Preston, and Trouton. FitzGerald himself did not live to be fifty, Preston died in his fortieth year, and now, to the great grief of all those who ever knew him, Trouton has left us at the age of fifty-eight, after having been kept by illness for the past ten years from the researches he loved.

Trouton was born in Dublin in November 1863, the son of a family well known in that city. As a student at Trinity College he gave early evidence of that versatility and quickness of grasp which characterised his scientific career. He studied both engineering and the physical sciences, and before graduating had already on one hand taken a leading part in surveying for a railway, and on the other enunciated that connexion between latent heat and molecular weight which is known as Trouton's Law.[1] He closed a brilliant undergraduate career by taking degrees in engineering and science at the same time, being awarded the coveted Large Gold Medal, rarely bestowed for science. He at once became assistant to the professor of physics at Trinity College, and until FitzGerald's death in 1901 he remained the cherished colleague and intimate friend of that great man. They carried out in collaboration many experiments, including an important series confirming, to a high degree of accuracy, Ohm's law for electrolytes. Trouton never spoke of FitzGerald without emotion characteristic of his generous nature.

The Dublin school was immediately struck with the importance of Hertz's experiments on electromagnetic waves, which were published in 1887 and 1888, and Trouton was one of the first to repeat them and to carry out original work on the subject. He settled the long-disputed question as to the relation between the direction of the vibration in the wave-front of an electromagnetic (light) wave and the plane of polarisation, by showing that the electric vector is normal to, and the magnetic vector in, the plane of polarisation. He demonstrated many analogies with optical experiments by suitably increasing the size of the apparatus to correspond to the great wave-length of the Hertzian waves—thus a wall built of bricks of paraffin wax was used to replace the soap film of ordinary light experiments. Trouton's work did much to establish the common electromagnetic nature of ordinary light and of Hertzian waves.

[1] If M be the molecular weight, L the latent heat, T the absolute temperature, then ML/T is constant.