

respect and esteem even of those to whom he was most opposed in opinion. In politics he was strongly conservative, although here again he never allowed himself to be fettered by party ties but pursued a path distinctly his own.

McTaggart was a born metaphysician. Even as a promising and favourite pupil of J. M. Wilson at Clifton, he is said to have displayed dialectical skill; and, on entering Trinity College, Cambridge, he began a brilliant career as an undergraduate, taking his degree as alone in the first class in the Moral Sciences Tripos of 1888. In 1891 he was elected a fellow of Trinity, having submitted as a dissertation the substance of what now forms the first four chapters of the book he published in 1896 (dedicated "to Miss Frances Power Cobbe, with much gratitude"), entitled "Studies in Hegelian Dialectic." There followed in 1901 "Studies in Hegelian Cosmology." An early draft of the last chapter on "The Further Determination of the Absolute" had been previously printed, in 1894, for "private circulation only"; and in the preface to this pamphlet the author characteristically observed: "I hoped that an attempt to explain my position to a few of my teachers and fellow-students might produce criticisms or refutations which should be profitable either in improving or preventing any further work on my part." Still another book on Hegel—"A Commentary on Hegel's Logic"—appeared in 1910. Here we are told that Hegel had been the chief object of McTaggart's life for twenty-one years, and he expresses his conviction that Hegel had penetrated further into the true nature of reality than any philosopher either before or after him. A more popular work, "Some Dogmas of Religion," saw the light in 1906; in it many novel views were propounded and they elicited no small amount of discussion. Lastly, in 1921, McTaggart published the first volume of what was evidently intended to be his *magnum opus*, on "The Nature of Existence." It is understood that he has left the manuscript of the remaining volume in a condition that will enable it to be put into print, so that we shall fortunately not be deprived of the outcome of his matured reflection.

To indicate the distinctive features of McTaggart's speculation in a few words is scarcely possible. In the "Commentary" mentioned above he stated his belief that the next task of philosophy will be to make a fresh investigation of the nature of reality "by a dialectic method substantially, though not entirely, the same as Hegel's"; and, in his last book, he attempted to show how that task is to be fulfilled. His method differs from Hegel's principally in neither accepting a *triadic* division of categories nor the partial falsehood of the lower categories. In the first part of his system, that dealing with the general nature of the existent, he admitted only two empirical premises—that "something exists" and that "what exists is differentiated"—and the rest, he claimed, is entirely *a priori*; in the second part, the results obtained in the first part were to be applied to the facts which empirical observation reveals, or appears to reveal.

McTaggart's idealism was not of the epistemological type; it did not rest, that is to say, upon any assumed dependence of the object known upon the knowing subject; it was what he was in the habit of calling

ontological idealism, as based upon the ground that nothing exists but spirit. Spirituality he defined as the quality of having content, such content being the content of one or more selves; and he held that the only existent realities are selves, groups of selves, and parts of selves. Among these selves there might conceivably be one self whose volitions had the appearance of influencing the rest of the universe so profoundly that he would properly be called a god; but McTaggart could find no evidence which would make his existence probable. Indeed, if the universe consist of a system of selves, and if that system be a unity which possesses spiritual significance and value, there would be, he urged, no need of a directing mind to account for the traces of order in it. In any case, if the universe be a society of selves, it cannot be a self; and, therefore, the *Absolute* cannot be God. Time, according to McTaggart, is an appearance which will ultimately merge into the timeless or the eternal. Finite selves will go on existing after death until they reach the end of the time series. They cannot be said to be immortal in the ordinary sense, but their lives will not really end, although their unendingness cannot be an unending duration in time.

G. DAWES HICKS.

MR. C. H. WORDINGHAM.

MR. CHARLES HENRY WORDINGHAM, who died on January 28 at the age of fifty-eight years, was well known as an electrical engineer. He was born at Twickenham in 1866, and was educated at King's College School and at King's College, London. He served his apprenticeship under Dr. John Hopkinson. He then joined the United Telephone Company, where his work consisted mainly in assisting with the erection of telephone exchanges. From 1889 to 1892 he was an engineer at the Grosvenor Gallery Generating Station of the London Electric Supply Corporation, where he was associated with Dr. Ferranti and Mr. Partridge in carrying out many of the pioneering experiments which led the way to such important developments. During this period also he was head of the meter testing department and devised methods of testing switches and fuses which were very useful in practical work. In 1892 he again became an assistant to Dr. Hopkinson and supervised the erection of the electric lighting stations at Manchester and Whitehaven. In 1894 he became chief engineer to the electricity works of the Manchester Corporation, and for the next seven years devoted himself whole-heartedly to developing the station.

In these early days many installations were laid down most carelessly, and the material employed was unsuitable. Wordingham established a testing department at the works and insisted that all the switches, fuses and other material used by his consumers should pass a standard test. He encountered great opposition at the start, but ultimately the manufacturers saw that it was to their advantage to have their devices tested. During his stay in Manchester he superintended the conversion of some 100 miles of tramways from horse to electric traction, and equipped 38 miles of new tramway.

Wordingham left Manchester in 1901 to practise as a

consulting engineer, and in 1903 he was offered and accepted the post of electrical engineer-in-chief to the Admiralty. Here he was responsible for the electrical equipment of all his Majesty's ships and for the electrical lighting and power used in the dockyards, including Rosyth and all the naval air stations. In 1918 he left the Navy and resumed his consulting practice. He was consulted by many local authorities on traction and lighting projects. He also gave expert evidence and supervised the erection of several power stations.

Wordingham served for many years on the council of the Institution of Electrical Engineers and no one took a greater interest in practically all the committees. He was president of the Institution in 1917 and 1918, and laid down a standard of work which subsequent presidents have found it difficult to equal. He was very enthusiastic that the Institution should found a Proving House for all electrical apparatus and material, but many difficulties stood in the way. During his presidentship he helped to found the Society of Radiographers, which is doing useful work. He made many contributions to the technical journals and wrote a useful book on "Central Electrical Stations."

He was president of the Junior Institution of Engineers and always took the greatest interest in young engineers, doing his utmost to encourage them.

A vast amount of work was also done by Wordingham in connexion with the Engineering Standards Association, being chairman of the Electrical Sectional Committees. He also took endless pains in getting the Wiring Rules of the Institution of Electrical Engineers accepted by the authorities. He has died at a comparatively early age, leaving many of the projects in which he was enthusiastically interested half finished. He was very popular with his colleagues, and he will be grievously missed by every electrical engineer.

A. R.

MR. GEORGE ABBOTT.

GEOLOGY perhaps more than any other science needs all the assistance which careful amateurs can bring to the total sum of knowledge. Men living on the spot are of the greatest service to the official geologists when a re-survey takes place. George Abbott was one of the most painstaking of local geologists, whose help was always at the service of those who needed it. Born on March 25, 1844, he was in his eighty-first year when he died on January 12 at Tunbridge Wells, where he had lived since 1878.

Scattered in various publications are many of his contributions to geology, but he was particularly interested in the various rock-forms which so often resemble organised life. From the magnesian limestone of Fulwell he obtained most of his specimens, and these he classified in so clear a manner that one was able to realise from his tables the series of stages by which such forms gradually grew to their familiar pseudo-organic shapes.

In 1896, in conjunction with the Rev. T. R. R. Stebbing, Abbott conceived the happy thought of creating a union of scientific and similar societies in the south-east of England for mutual help, and the first two of the South-Eastern Union's Annual Congresses were held at Tunbridge Wells. The Union grew into a vigorous organisation and has held its annual congresses regularly ever since, whilst its annual proceedings, *The South-Eastern Naturalist*, is now accepted as a responsible scientific publication. Some years later he founded a Geological Physics Society, but here apparently was a society which was not needed, for after a few years of vicissitude it ceased to exist. Its work is being done by other organisations, but as a protest against the overpowering study of palaeontology it performed some useful work.

Abbott had suffered a good deal during the last few years, and his favourite study, apart from his medical duties, was a great comfort in the time that he was laid by. He founded the local natural history society, and supplied many specimens to the elementary schools of the borough, on the Town Council of which he served for some years. He also established the Eye and Ear Hospital at Tunbridge Wells, and was Hon. Surgeon from 1878 to 1886.

WE regret to announce the following deaths:

Prof. W. A. Haswell, F.R.S., emeritus professor of biology in the University of Sydney, and author, with the late Prof. T. Jeffrey Parker, of "A Text Book of Zoology," aged seventy.

Dr. N. Kulchitsky, lecturer in histology at University College, London, and formerly professor of anatomy in the University of Kharkov, on January 29.

Dr. D. B. Spooner, deputy director of archaeology in India since 1919, on January 30.

Prof. Hermann Schunck, a former director of the Badische Anilin- und Soda-Fabrik at Ludwigshafen, who retired in 1923, on January 8, at Solln near Munich.

Current Topics and Events.

ELSEWHERE in this issue appears an account of a remarkable discovery which appears to afford *prima facie* evidence of the occurrence at a remote period in South Africa of a pre-human stock, neither chimpanzee nor gorilla, and possessing a series of characters differentiating it from any anthropoid hitherto known. Fossilised fragments from a limestone cliff formation at Taungs, 80 miles north of Kimberley, in Bechuanaland, when fitted together, have revealed a natural endocranial cast with almost the entire face of what at first sight appeared to be an anthropoid, but on closer examination is found by Prof. Dart to exhibit humanoid rather than anthropoid characters.

The occurrence of a fossil anthropoid so far south would in itself be sufficiently remarkable, but the interest and importance of this discovery is enhanced by its remarkable divergence from the anthropoid and its approximation to the human stock. Not only is this exhibited in the character of the cranium as a whole, but it is also apparent in the formation of the brain, so far as this is indicated by the endocranial cast. The position of the foramen magnum, if correctly estimated, in itself would indicate that this sub-human type was well on the way towards acquiring the upright posture, and the inference of an increase in intelligence which would follow upon a