enthusiasm for physiology, and for experimental science as a whole, which they have kindled in him, warms and colours all the wider interests and all the wise and generous human impulses which are here displayed. And, together with its major components, Prof. Hill, with an impatience for stolid conventions which his friends and admirers have learned to expect, has included in his book quite an array of the records of his random effusions and explosions—a journalistic *canard* involving the apparent loss by the late Prof. Donnan of his famous equilibrium, letters to *The Times*, squibs, lampoons, parodies, shafts of scornful humour aimed at many targets. These too represent, indeed, a part of the essential "A. V.". It is to be hoped that they will give enjoyment to many readers, widely beyond the circle of the professional scientists, but all capable of responding to the more serious challenge and stimulus of the book as a whole. My only personal complaint of it is that I have found it rather heavy in the hand for reading in bed.

H. H. DALE

EDDINGTON: PHILOSOPHER OR PROPHET?

The Philosophy of Science of A. S. Eddington

By John W. Yolton. Pp. xiii+151. (The Hague: Martinus Nijhoff, 1960.) 11.50 guilders.

MORE than fifteen years after Eddington's death there is still an Eddington problem. The problem has changed somewhat, it is true, but has not become less puzzling. At first—during the last ten years of Eddington's life—it seemed as if the right question to ask was, 'Has he done what he says he has done?', and immediately after his death this assumed in many people's minds the less scientific form, 'Can he have done what he said he did?'. Now both these questions seem to be answered by a more or less firm negative; the more interesting question, 'Is it possible to formulate the idea of a theory of Eddington-type, in such a way that it will be a significantly new type of theory giving a greater insight into science, but at the same time one which will indeed be possible?', is that of most immediate interest. Roughly, a theory of Eddington-type would mean a theory which seeks to exploit to the full any limitations imposed on the propositions of scientific theories by the methods employed in making the experiments. Such a theory would need to discuss this kind of limitation very carefully: and, because we must understand 'proposition' here in a very general sense to mean a thought, sentence written or spoken or a manipulation with bits of the physical world, a theory of Eddington-type must itself be in a sense a philosophy of science—but not in the sense usually meant.

Before such a plan could be carried out we should need to get one 'white elephant' out of our path: that is, the fact that Eddington himself philosophized not 'in' what he was doing, but 'about' what he was doing, and not always in a very consistent manner. The present book is of some assistance here. It is a revised version of the essay which won first prize in the Belgian Eddington competition, and it seeks to show this self-conscious Eddington philosophy in its correct, essentially British, context.

Locke and Hume are shown as the ancestors of a theory of knowledge, the most recent professional exponents of which include Russell. "Any analysis of Eddington's philosophy of science must recognize the twin strands of operationalism and dualism in his thought and must appreciate the possibility of uniting them... [by]... a careful analysis of dualist meaning." Such a discussion gets us no nearer to an appreciation of scientific theories of Eddington-type, but the author is clear and comprehensive in his purely philosophical task. C. W. KILMISTER

HENRY CAVENDISH: HIS LIFE AND SCIENTIFIC WORK

Henry Cavendish

His Life and Scientific Work. By A. J. Berry. Pp. 208+4 plates. (London: Hutchinson and Co. (Publishers), Ltd., 1960.) 35s. net.

IT is more than a century since George Wilson published (under the auspices of the Cavendish Society) his *Life of the Honourable Cavendish* in which he remarked on the paucity of information regarding the man himself. It is a careful and thorough piece of work, so it is not surprising that no further attempt was made to write a life of Cavendish, at least until after 1879, when there appeared Maxwell's edition of Cavendish's electrical researches, for the most part not previously published, hence unknown to physicists before that date. This revelation would have led, one might have thought, to a revaluation of the place of Cavendish in the history of science, adapted to the needs of those not having the detailed knowledge to read the *Collected Researches*, a further volume of which, *Chemical and Dynamical*, appeared with a revised version of the former in 1921. Mr. A. J. Berry's book can be said quite literally to fill this long-felt want.

Of Cavendish's life and personality little more could be added to what Wilson had written, but the new presentation of the evidence should at least dispel the common opinion that the sole occasions of Cavendish's emergence from Clapham Common were his attendances at the Royal Society Dining Club. Whenever and wherever a scientific matter was involved, Cavendish was an active and often a leading participant. Perusal of the Council minutes of the Royal Society reveals his very regular attendance at meetings of that body over two separate periods of several years; that he was chosen several times as one of the auditors of the Society's accounts; and was a member of the committees 'on measuring the attraction of hills and mountains', the protection from lightning of the Purfleet powder magazines, the disposal of meteorological and magnetic recording instruments at Somerset House, the flooring of powder mills such as Waltham Abbey, the 'erosion' of the gold coinage and the thermometric scale. Above all, he regularly took part in the 'Visitations to the Royal Observatory', and his name is usually prominent where a report on any special instrument was called for. Many of these duties, as also some of his private researches, involved a good deal of travel. Finally, the fact that a year before his death he was asked to join the group within the Royal Society known as the 'Society for the Promotion of Animal Chemistry' suggests that he was