

I wish to add one last word, on the desirability of printing the name of the author of the species following the scientific plant or animal name. I labored for years to secure this obviously just custom with one important bibliographical publication before the publishers were convinced of its importance.

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SCIENTIFIC BOOKS

Stars and Atoms: A. S. EDDINGTON, Sc.D., F.R.S., Plumian Professor of Astronomy in the University of Cambridge. New Haven: Yale University Press. London: Oxford University Press. pp. 127.

IN "Stars and Atoms" Professor Eddington has given us one of the most valuable and delightful monographs on astronomy that has ever appeared in the literature of science.

The rapid strides of physics and chemistry into the realms of the stars have fairly bewildered students of the older astronomy, and it is a remarkable service which the author has rendered in giving to the general reader, without mathematical details, the essential problems of modern astrophysics. With a sufficiently extensive description of the atom and its ionization that will enable the general reader to picture the mechanism of radiation and radiative temperature, the author portrays the essential make-up of the sun and stars and makes clear the problem of the maintenance of their heat.

When one reads the all too often dogmatic statements concerning recent advances in astronomy, one feels refreshed in finding so great an authority as Dr. Eddington sounding notes of caution while making sharp distinctions between the demonstrable and the speculative.

The saving sense of humor which relieves the dilemma in many an embarrassing scientific situation keeps the reader in friendly terms with the scientist, even in his wildest guesses and in the end fosters a genuine faith and confidence in results of notable significance.

In few books, indeed, does one sense more acutely the true spirit of science in its never-ending quest for divining the nature of things. From the first chapter to the last the reader is carried at almost breathless pace through round after round of astrophysical discovery till he is introduced to matter in all but unbelievable states as it exists in the companion to Sirius.

In his final chapter on stellar evolution, Dr. Eddington makes a strong argument for the annihilation of

matter through the radiation of mass, but does not overlook such technical details and perplexities as the simultaneous existence of giant and dwarf stars in coeval clusters, the problem of devising laws for the release of subatomic energy consistent with the demands of astronomical observations and at the same time reconcilable with any satisfactory picture of the annihilation of matter which the student of subatomic activity can postulate.

A lesser scholar than Eddington would not have closed the book with an anticlimax. It is a mark of genius and modesty worthy of a successor to the traditions of Newton that his closing paragraph should read:

I should like to have closed these lectures by leading up to some great climax. But perhaps it is more in accordance with the conditions of scientific progress that they should fizzle out with a glimpse of the obscurity which marks the frontiers of knowledge. I do not apologize for the lameness of the conclusion, for it is not a conclusion. I wish that I could feel confident that it is even a beginning.

H. T. STETSON

SPECIAL ARTICLES

THE CORRELATION BETWEEN INTELLIGENCE AND SPEED IN CONDUCTION OF THE NERVE IMPULSE IN A REFLEX ARC

THE present paper is a preliminary report of a study to determine if there is any relationship between the factors of intelligence and reflex time or speed in conduction of the nerve impulse in a reflex arc.

My work of the last three years as a fellow of the National Research Council has centered around an investigation of the neural processes in stuttering, and there has developed out of this research a refined technique for utilizing action current measurements in functional neuromuscular derangements. In studying certain reflexes during stuttering among patients widely different in intelligence an apparent relationship between reflex time and intelligence or mental ability was noted. These observations were verified on the patellar tendon reflex. Nearly all the excellent work that has been done on this reflex has involved so-called gross reflex time or the time elapsing between the application of the stimulus and the movement of the foot or thickening of the muscle. This gross reflex time probably would not correlate very highly with such mental factors as we wish to study because nine tenths of the time is taken up by movement of the muscles in extending the foot and any factor affecting the central nervous mechanism