

Woman's physical weakness was at least as potent a factor as her uncleanness in reducing her to subjection. Weakness at all times has been an open invitation to the practice of cruelty and tyranny.

This rapid sketch of the contents of this admirable little book, hardly does justice to the wealth of material gathered in it, or to the close reasoning on which the conclusions are based. Dr. Westermarck's works have already become classics. Students of Sociology look for nothing but first class work from his pen, and they will not be disappointed in his *Early Beliefs and their Social Influence*.

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STATISTICS IN THEORY AND PRACTICE. By L. R. Connor, M.Sc. (Sir Isaac Pitman & Sons, Ltd. 1932. 12/6.)

This is an elementary text-book suitable for students of Economics and Sociology, and is one exceedingly good at that. Simple Algebra up to the Binomial Theorem is all that is assumed on the part of the student, and accordingly the book deals up to, and with, elementary problems in sampling. There is also a chapter on the simpler problems of Finite Differences and Graduation. The more important part of this book, however, is that devoted to "Applied Statistics". In twelve chapters the whole range of economic statistics is covered and special attention should be invited to the very clear and useful chapter on Business Barometers and Business Activity Indices. It is claimed in the Preface to this book that this is an age of Statistics, to which may well be added that it is an age also of books on Statistics. This one, however, does credit both to the author and the publishers.

K. B. MADHAVA.

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THERMIONIC VACUUM TUBES AND THEIR APPLICATIONS. By E. V. Appleton, M.A., D.Sc., F.R.S. Pp. 117 with 68 diagrams. (Methuen & Co., Ltd., 3s. net.)

Since the publication in 1920 of Vander Bijl's excellent treatise nothing comparable to it in scope and character has been published, at any rate in the English language, consistent with the sustained and remarkable progress in the development and application of thermionic tubes.

In this small monograph, Prof. Appleton has in view the needs of the student of physics and the radio amateur desiring to obtain a proper understanding of the internal physical action of thermionic tubes and

their behaviour in typical circuits. A short reference to the laws of the thermionic emission of electricity is followed by a brief description of the construction of modern receiving tubes. The influence of the geometrical disposition of the electrodes on the performance of the diode and triode are examined in a few typical cases. The chapters on the triode as amplifier, rectifier and oscillator of oscillations cover the usual ground and are models of clear exposition of the essentials. The author has touched upon such subjects as the generation of extremely short waves, soft tubes, the multi-vibrator, etc.

Even in the small space of this monograph, some mention was expected regarding transmitting tubes, their construction and their behaviour in typical cases. The author has completely omitted this aspect of the subject. Some space might have been devoted also to the advantages, in certain cases, of the use of the anode-voltage-anode current characteristics of a triode. There are a few other omissions but of a minor character.

Despite these, the book gives a very lucid and concise account of the physical action of a scientific appliance of increasing service and popularity. The list of references at the end of each chapter enhances the value of the book to the reader.

R. E.

* * *

AN INTRODUCTION TO SCIENCE, BOOK II—SCIENCE AND LIFE. By E. N. Da C. Andrade and Julian Huxley. Pages 248 (Basil Blackwell, Oxford.)

The recent introduction of the biological sciences in the syllabus of the secondary schools is a step in the right direction. Formerly, attention was concentrated on the study of the physical sciences and biology was sadly neglected. But the mere introduction of biology is not all. Even to-day the three branches of study are treated in water-tight compartments and each is studied independently of the others. This procedure is not fruitful of desirable educational results, inasmuch as it circumscribes the mental horizon of the secondary school boy. Nowadays the border lines between the branches of science are fast vanishing and this is very helpful in widening the outlook of the mind, which is the essence of scientific education. Hence the imminent necessity for a syllabus that is a harmonious blend of the three main branches of scientific knowledge.

The book under review is one intended for the boy entering the secondary school. Here the classic syllabus is treated in a novel way. The main subject dealt with is undoubtedly biology, while physics and chemistry appear as its hand-maidens. The treatment of biology or the physical sciences, in sections all by themselves is entirely dispensed with. The three subjects are treated in their inter-relationship. In the preface the authors say that this is the second of a series of four books intended to cover the whole field of elementary science. So this book is a direct outcome of Book I. As regards the treatment of the subject itself, though it lacks the rigours and austerities of the usual text-books, it arouses interest without encumbering the mind with many technical details. Throughout the book the fundamental idea of the oneness of nature is never lost sight of, and as far as possible the inter-dependence of living creatures is stressed upon. Science is here made an organized and living body of know-

ledge and not a class-room subject. The mysteries of the laboratory are to a great extent unravelled and treated in a manner easily understood by the beginners. The authors themselves, who are eminently qualified to the task before them, have spared no pains to make themselves explicit. Technical jargon finds no place here while the intricate workings of nature are presented in a language which is alike popular and chaste. The experiments mentioned are all amply illustrated by figures, which, while preserving a sense of proportion, are highly explanatory. The book itself is very handy and the general get-up attractive.

Without any hesitation, we would strongly recommend this book to the secondary school boys, who might be said to be at the threshold of science. The adoption of this series will, we hope, introduce a new outlook in the teaching of science in the secondary schools which is very badly needed.

C. N. R.

Two Statements.

The Alimentary Glands of the Earthworm *Eutyphæus*.

I AM sorry for the following incorrect statements made by me in my note published in the February, 1933, number of *Current Science*, which, I have now been satisfied, are not justified by the actual facts of the case:—

- (1) "The work on the Physiology of the glands, now claimed by Dr. K. N. Bahl as his own was actually carried out as late as 1929 by one of our former students, now colleague in the Department."

- (2) "I would certainly protest against his appropriation of the work of his colleagues and Assistants."

I withdraw these statements.

G. S. THAPAR.

I am very sorry for the words "In appropriating these results of mine" used by me in my note published in the February, 1933, number of *Current Science*, and I withdraw them.

Lucknow,
April 23, 1933.

K. N. BAHL.

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