

The Nation's Intelligence

By J. L. Gray. (Changing World Library.) Pp. iv + 154. (London: Watts and Co., 1936.) 2s. 6d. net.

The Menace of British Depopulation

By Dr. G. F. McCleary. Pp. 148. (London: George Allen and Unwin, Ltd., 1937.) 4s. 6d. net.

THESE two books, both conceived on scientific lines, and both written in the scientific spirit, are concerned with two momentous issues. One of them asks the question: Are we heading for national stupidity? The other asks the still more stirring question: Are we heading for national suicide?

In dealing with the first of these questions, Mr. Gray confronts the school of writers who hold that the offspring of the prosperous classes are on the average abler than the children of the poor in virtue of their superior mental inheritance, and who do not shrink from the inference that our high expenditure on social services, including education, simply encourages the perpetuation of inferior types, and ought, therefore, to be restricted. Arguing, as we have said, on strictly scientific lines, and without any social and political prejudices, Mr. Gray gives reasons for believing that there is no cause for alarm, that there is no ground for supposing that the average intelligence of the community is decreasing, and that, so far from being a blunder, the raising of the physical and intellectual level of the masses is of vital importance.

As to the menace of depopulation, Dr. McCleary sounds the definite note of warning. The population of Great Britain is still increasing, but at a rate so greatly reduced as to point to the beginning of decrease in the near future. If, says he, our present fertility and mortality rates remain at their present level, we shall enter upon a period of decline which must end in extinction. Most people, by the way, do not realize the position, because they are misled by an unscientific and superficial view of the relevant statistics. As the same process is going on in most of the Overseas Dominions of the British Empire, and as the mother country will soon be able to do nothing to help them, the outlook for the Empire is a black one. The author is in no doubt that the main cause of the decline is voluntary birth-control. He sees little hope of stimulating the growth of population by such artificial expedients as family allowances and marriage loans. Yet he does not close on a note of despair. The effective remedy, he holds, lies in making life better worth living for all classes of the community.

Vakuumspektroskopie

Von Dr. Hans Bomke. Pp. x + 248. (Leipzig: Johann Ambrosius Barth, 1937.) 17.70 gold marks.

SINCE the publication of Lyman's monograph "Spectroscopy of the Extreme Ultra Violet", there has been a steady development of technique and accumulation of results in the field of vacuum spectroscopy. Improved glass gratings and the use of grazing incidence have enabled the limit of the spectrum to be pushed to shorter wave-lengths, until now it is well within the long-wave limit of soft

X-rays. Many spectra have already been studied. It has thus become desirable that a new survey should be made of the investigations which have been carried out in this field. In his valuable little book "Vakuumspektroskopie" Dr. Hans Bomke has set himself this task.

Dr. Bomke opens with a brief historical review, then proceeds to describe in considerable detail the design of various types of vacuum spectrographs, their method of use and the construction of light sources suitable for them. About two thirds of the book are devoted to these topics. The remaining third is concerned chiefly with work which has been done on the spectra of atoms, although eight pages at the end briefly summarize results obtained with molecules and solid bodies. The appendix contains useful constants and a very full bibliography.

This book should prove of great assistance to those desirous of becoming acquainted with recent researches in the extreme ultra-violet.

A Text-Book of Inorganic Chemistry

Edited by Dr. J. Newton Friend. Vol. 11: Organometallic Compounds. Part 4: Derivatives of Selenium, Tellurium, Chromium and Platinum. By Archibald Edwin Goddard. Pp. xxviii + 292. (London: Charles Griffin and Co., Ltd., 1937.) 20s. net.

THE subject-matter of the present volume is concerned with the aliphatic and aromatic derivatives of selenium and tellurium and the organic compounds of chromium and platinum. It is almost entirely of interest from the point of view of organic chemistry, and it may be suggested that vol. 11, dealing with organo-metallic compounds, four parts of which making up a total of 1,632 pages have already been published, is out of proportion with the rest of the work. In the present volume, very minute details of preparation are given and the text will be of interest mainly to the specialist. The literature appears to have been very well covered and there are good indexes. For those who wish to inform themselves of the subject of which it treats the book will be a very useful guide. The preparations are nearly always given in sufficient detail to make reference to the original publications unnecessary.

Practical Stereoscopic Photography

By J. Moir Dalzell. Pp. xv + 224. (London: The Technical Press, Ltd., 1936.) 10s. 6d. net.

DR. MOIR DALZELL'S book deals with the minutiae of a single branch of photography. The subject is for the most part clearly treated, but the complete absence of illustrations renders some parts difficult to follow. In the early chapters the author discusses the characteristics of binocular vision, describing the psychological effects of various muscular actions and their relation to our interpretation of what we see. There follows a very complete treatment of apparatus and technique. Much of the part dealing with technique is applicable to general photography, and will be found very valuable to the 'one lens' workers as well as to stereo workers.