

in 1876—36·3 per 1000 population—and has gradually fallen since then to about 23 at the present time, and this in spite of the marriage-rate having remained almost constant. The decline of the birth-rate has not operated uniformly throughout the country, but is more marked among the middle and upper classes. Thus in Hampstead the corrected birth-rate fell from 30·01 in 1881 to 17·55 in 1911, while the corresponding rates for Shoreditch are 31·32 and 30·16.

The general conclusion of the committee seems to be that the decline in the birth-rate is due to the deliberate limitation of families by anti-conceptives and other means. At the same time it is to be noted that the result of a census—a comparatively small one, it is true—taken by the Commission of those who employed anti-conceptive measures and of those who did not showed that the size of the families was slightly larger among the former! The conclusion arrived at by the Commission seems to be based upon the unanimous opinion of the witnesses of the extensive and increasing use of anti-conceptive measures, particularly among the more well-to-do classes of the community. Two of the witnesses, however, Dr. Chalmers and Dr. Brownlee, maintained that there are cycles in fertility, and that now we happen to be in a cycle of low fertility. Among the lower classes, especially in industrial areas, the use of abortifacients appears to be rife, and this may be a not unimportant factor in reducing the birth-rate.

Various topics bearing on the question are dealt with in the evidence, such as the influence of financial circumstances, housing, religious belief, etc. One point of interest brought out is that the fertility of "college" women seems to be as great as that of "non-college" women, though, as might be expected, the age at marriage of the former is somewhat higher than that of the latter.

The Commission is unable to formulate any measures for arresting the decline beyond the use of moral suasion to induce the married to fulfil their responsibilities.

The volume is an intensely interesting one, and should be in the hands of all who are interested in this national question. R. T. HEWLETT.

SANG'S SEVEN-PLACE LOGARITHMS.

A New Table of Seven-Place Logarithms of all numbers from 20,000 to 200,000. By Edward Sang. Reprinted from the original stereotype plates now in the custody of the Royal Society of Edinburgh. Pp. xviii + 365. (London: C. and E. Layton, 1915.) Price 21s. net.

THIS table was originally printed in 1870 from the stereotype plates in the custody of the Royal Society of Edinburgh. The present book is a reprint published in 1915.

Edward Sang (1805-90) was perhaps the greatest calculator of logarithms. An excellent account of the extraordinary energy that he brought to bear upon this work is to be found in a paper by Dr. C. G. Knott, of the Royal Society of Edinburgh, which forms part of the Napier

memorial volume published in connection with the Napier tercentenary held in Edinburgh in July, 1914. Sang computed, independently of all previous work, the logarithms to twenty-eight places of all primes up to 10,037, each prime being put into relation to at least three others. By combination of these primes he tabulated the logarithms to twenty-eight places of all integral composite numbers from 1 to 20,000, a few gaps due to uncalculated primes being left. From this table he calculated by interpolation a great table of logarithms to fifteen places of all integral numbers from 100,000 to 370,000. Dr. Knott considers that Dr. Sang was justified in assuming the absolute accuracy of these tables to the fourteenth place.

This material, which may be regarded as a fundamental basis for all future tabulations, has never been published. All mathematicians would agree that publication should take place, and Dr. Knott discusses at length different methods of procedure. As the manuscripts are beautifully written he inclines to the opinion that it would be simple and a guarantee of accuracy to reproduce them as line engravings by photography. He considers that a quarto volume of some 1200 pages would suffice for the fundamentally important parts of the manuscripts, and he estimates that the cost of reproduction by photography would be about one-third or one-fourth the cost of setting them up in type in the usual way. It would, indeed, be a fitting outcome of the Napier tercentenary if this could be brought about, and the writer is convinced that if Dr. Knott and his colleagues in Scotland will persevere with the idea they will be astonished at the support they will receive even in these strenuous times.

This reprint is perfectly and conveniently printed with the usual description and examples of computation. P. A. M.

OUR BOOKSHELF.

Mentally Deficient Children: Their Treatment and Training. By Drs. G. E. Shuttleworth and W. A. Potts. Pp. xix + 284. Fourth Edition. (London: H. K. Lewis and Co., Ltd., 1916.) Price 7s. 6d. net.

WE welcome very heartily the fourth edition of Drs. Shuttleworth and Potts's excellent handbook on mentally deficient children. The book has been very carefully revised, and a chapter added concerning the mental troubles of youth. The main new feature of the present volume is an extremely interesting account of the Mental Deficiency Acts of 1914—these being the ultimate result of the Royal Commission of 1904.

The Acts now enable the authorities to deal with all mental defectives: (a) if under twenty-one years, at the instance of parent or guardian; or (b) at any age if found neglected, abandoned, destitute, or cruelly treated, criminal or inebriate, or being the pauper mother of an illegitimate child—and Dr. Shuttleworth states that "with the judicious administration of the new Acts it is hoped that Great Britain will stand ahead of