

and the wide view which is taken of the subject is further reflected in the sections at the end of the book devoted to non-parasitic diseases (caused doubtless by disturbances in physiological balance generally and in enzyme secretion particularly) and to various abnormalities in growth.

F. C.

*The Bradshaw Lecture on the Biology of Tumours.* By C. Mansell Moullin. Pp. 39. (London: H. K. Lewis, 1913.) Price 2s. net.

MR. MANSELL MOULLIN has published as a booklet the Bradshaw lecture which he recently delivered before the Royal College of Surgeons. It treats of new growths or tumours from the biological point of view; he regards the division of them into malignant and innocent as a mere useful convention; there is no sharp line of demarcation between the two groups. He prefers a division into those which spring from germ-cells and possess a more or less complete individuality, and those which spring from somatic cells and are due to escape from control of what remains to them of their primitive form of growth. The short course of an hour's lecture precluded any full treatment of this large subject. The various theories of malignancy are not discussed, but the parasitic nature of cancer is denied. With regard to cure, we have the confession that at present the surgeon's knife is the only safe remedy, though the lecture concludes with the hope that this will not always be so. No reference is made to the part chemistry has played or will play in the elucidation of the cancer problem. Until we know what are the biochemical or metabolic actions in the cells of a new growth, we can scarcely hope to grapple with the methods which will ensure recovery.

W. D. H.

*The Physical and Political School Atlas.* By J. G. Bartholomew. Pp. xvi of uncoloured maps and texts; 32 coloured maps. (London: Oxford University Press, 1913.) Price 1s. net.

THIS cheap and trustworthy atlas may be commended to the attention of teachers of geography. The attempt in some cases to show land relief and other physical features as well as the political geography of a country on one and the same map has led to overcrowding and indistinctness. Where this mistake has been avoided the maps are bold, clear, and convincing.

*"Half-inch to Mile" Map of England and Wales.* Sheet 3. Cumberland, &c. New and revised edition. (Edinburgh: John Bartholomew and Co., n.d.) Price, in case: 1s. 6d. paper; 2s. on cloth, or 2s. 6d. on cloth dissected.

LIKE other maps in this excellent series, this of the Lake District is reduced from the Ordnance Survey, and has been revised to date. The map is coloured in the now familiar browns and greens, and in consequence the surface relief can be understood with ease. All details likely to be required by tourists and sportsmen are indicated, and altogether this sheet well maintains the high reputation of the series.

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## LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

### The Falling Birth-rate.

IN her lecture, delivered at University College, London, on February 25, Miss Elderton, of the Galton Laboratory, in dealing with the falling birth-rate, pointed out that the decrease is least acute in the mining districts; the engineering trades, which represent the best paid of the artisan class, come next; while textile districts coincide with residential districts in showing the biggest decrease; and she asks if there is some cause which operates to a special degree in certain classes.

One important operating cause, no doubt, is the large and increasing number of women employed in the textile trades. On the other hand, with the exception of a few pit-brow girls, practically no females are employed in the mining and engineering industries; and it is, therefore, perhaps scarcely surprising to find a greater birth-rate amongst the wives of miners and engineers than amongst the women in the cotton and woollen districts. The married woman operative in the Lancashire cotton mills, for example, knows that each new addition to the family entails some weeks' loss of work and wages before and after her confinement, and it also means an increased weekly charge when the baby is, according to Lancashire custom, "put out to nurse"; and no doubt this knowledge acts as a considerable check upon the birth-rate.

The decrease in the residential districts is due, no doubt, in part, to the "increase in luxury of living and love of pleasure" referred to by Miss Elderton, and in part also to the comparatively large number of women who are employed in such districts in domestic service. The rise in the average marriage age must also be taken into account.

Nor must we forget the influence of education. It is worthy of note that the fall in the birth-rate in this country practically dates from the passing of the Education Act in 1870. This new influence would make itself felt in a variety of ways. The check on the employment of child labour, for example, would tend to act as a check on the birth-rate, for whereas formerly children became wage-earners at a very tender age, they would, after the passing of the Act, not only cease to be wage-earners, but would actually be an increased charge on the parents. The increase in the knowledge of physiology, which has spread in recent years as a result of free education, may also not be without its influence.

Yet another factor—again ascribable not very indirectly to free education—is the change in religious sentiment which has been so pronounced during the last quarter of a century. Among other things, people are beginning to doubt whether, in these days, the "quiver full" of children is the unqualified blessing which the Psalmist declared it to be. They are realising that it is better to be the parent of two or three children, well provided for, than of a half-score or so of starvelings.

Miss Elderton also tells us that "a further analysis of figures for several northern towns shows generally that the higher the wages the smaller the family." This is exactly what, other things being equal, one