

number of references and accounts of earlier work on the same subject. The attempt to make the book do double duty is perhaps as good a success as could have been expected, though at times a sudden transition from the encyclopædia to the text-book style, or vice versa, is rather startling.

It is to the mathematical physicist that the author makes his appeal, rather than to the crystallographer. His purpose is to explain the phenomena of elasticity, piezo-electricity, radiation, electrostatic and electromagnetic potential, etc., in the light of such modern ideas as the quantum and X-ray diffraction, basing his work on assumptions about the interaction of atoms the positions of which form simple or interlacing space-lattices.

The book is not easy reading, but it will be a valuable and interesting addition to the library of any reader of the class for which Prof. Born is writing. H. H.

*Palgrave's Dictionary of Political Economy.* Edited by Henry Higgs. Vol. 2: F-M. Pp. xix+962. (London: Macmillan and Co., Ltd., 1923.) 36s. net.

"PALGRAVE'S Dictionary of Political Economy" is so well known that it is unnecessary to introduce the new edition, which is edited by Mr. Henry Higgs, who rendered some assistance to Palgrave when the work first came out thirty years ago. Mr. Higgs has wisely decided to introduce very few changes into the text as it stood; he has relegated to an appendix additions to the more important articles. In some instances, as in the case of "Index Numbers" by Prof. F. Y. Edgeworth, he has been fortunate enough to obtain these additions from the pen of the writer who provided the article for the original work.

Volume 2 is the first to appear, and the others will follow in due course. Had the whole of the work been planned for the first time at present, its character might have been very different. But it speaks much for the far-sightedness of Palgrave that his work should still appeal. A few minor changes have been introduced into the articles in the body of the book, and among the more important of those that have been continued in the appendix may be mentioned factory legislation, French and German finance, and recent tendencies in economic thought (French, German, and Italian). As in the body of the book, so in the appendix, a good deal of space is devoted to biographies of well-known economists. Needless to say, too, the new articles are furnished with bibliographies. The general index at the end has been retained, and the new material has, of course, been incorporated. The present edition will be found as useful as ever; and good as was the reputation of the work, in its new guise that reputation has been enhanced.

*Eighth Scientific Report on the Investigations of the Imperial Cancer Research Fund.* Pp. vi+142+62 plates. (London: Taylor and Francis, 1923.) 20s.

THIS report maintains the high standard of its predecessors. It contains ten separate papers, most of which are reprints. Some of these deal with the behaviour and character of cells already cancerous, while a second group deals with the changes which the cells undergo in becoming cancerous. Of peculiar

interest and importance is the paper by Dr. A. H. Drew on the growth and differentiation in tissue cultures, for he clearly shows that when cultivated free from connective-tissue elements, tissues and tumours grow as undifferentiated sheets. If, however, connective tissue be added to such growths, differentiation sets in. The connective tissue may be derived from any organ. Thus, the presence of connective tissue from heart will cause the formation of acini in a mammary cancer or the formation of tubules in cultures of kidney. These remarkable results constitute a definite and important advance in our knowledge of the biology of the cancer cell.

A considerable part of the report is occupied by the exhaustive paper of Dr. Alexander Scott on the occupation dermatoses of the paraffin workers of the Scottish shale oil industry. This is the fruit of twenty-four years' labour in the shale district, during part of which time every workman was examined every three months, and it constitutes a unique record for a single observer. The perusal of the report of the Imperial Cancer Research Fund shows clearly that the Director and his co-workers have set themselves high ideals in the study of the problems of cancer, and in certain branches have been rewarded with success.

- (1) *Leib und Seele: eine Untersuchung über das psychophysische Grundproblem.* Von Hans Driesch. Dritte Auflage. Pp. viii+115. (Leipzig: Emmanuel Reinicke, 1923.) 2s. 6d.
- (2) *Wissen und Denken: ein Prolegomenon zu aller Philosophie.* Von Hans Driesch. Zweite durch anastatischen Druck hergestellte Auflage mit Ergänzungen als Anhang. Pp. vi+152. (Leipzig: Emmanuel Reinicke, 1922.) 3s. 9d.

THE third edition of Prof. Driesch's study of the psycho-physical problem does not appear to be altered from the second (1920). The second edition was considerably enlarged from the first and developed the theory of the nature of self-hood. The most valuable feature of Prof. Driesch's method in investigating the question of psycho-physical parallelism is the realistic way in which he examines the facts and exposes the paradoxes which result from any attempt to work out an exact parallelism between ultimate physical and psychical elements. His well-known vitalistic theory of "entelechy" precludes the possibility of an exact correspondence.

*Chemistry and Physics for Botany Students.* By Dr. E. R. Spratt. Pp. vi+196. (London: University Tutorial Press, Ltd., 1923.) 3s.

To quote from Dr. E. R. Spratt's preface, "a preliminary knowledge of the elementary principles of Chemistry and Physics is essential to the proper understanding of the life-processes of both plants and animals." Dr. Spratt apparently intends to meet this need, but the book scarcely justifies the addition to its title of "for Botany Students." It appears to be an average course of elementary chemistry with some physics, in which is inserted an occasional paragraph referring to plants. The experiments described throughout are such as any student of chemistry would be expected to perform, and little attempt is made to show their relation to processes of plant life.