NEW BOOKS

*Medical Education: A Comparative Study.* By Abraham Flexner.
New York: The Macmillan Company. 1925.

This, a study of medical education comparing the methods and the results in different countries, is one of the most stimulating and interesting of recent publications dealing with the subject. It will interest everyone who is concerned with medical education, and, it may be said, it will irritate, here and there, all its readers, for Dr Flexner has pretty definite views and permits himself a free hand in criticism. Just as an example of this, we may refer to p. 231, where he says: “From the educational point of view, things become worse instead of better if use is made of scattered local dispensaries, where young physicians and, as at Edinburgh and Munich, senior students acquire experience and minister to patients without equipment, organisation or supervision.” This is not how we used to regard our dispensaries.

The book is divided into a series of chapters dealing with types of medical schools, general education, modern languages, the curriculum, the laboratories and the clinics, and finishes with an interesting chapter on costs, from which we shall make some quotations later.

The chapter on general education is particularly interesting, for in it one finds, in conveniently concentrated form, information about secondary school education in Great Britain, America, France, Germany, Austria, and the Scandinavian countries. In all these, as here, the contest about Latin proceeds, and it will interest the Scottish Universities' Entrance Board to note that a student from an Ober-Realschule may enter the university without Latin, but must procure instruction in it before matriculating in the medical faculty. French students have all to study Latin, and most of them Greek in addition, while Swedish and Dutch boys may enter the universities and complete their medical education without Latin.

Dr Flexner's discussion of the clinics of the different countries results in their division into three classes: The almost entirely practical of France; the mainly scientific of Germany; and the compromise in Great Britain, and, in a similar direction, in the Scandinavian countries. One gathers the impression that Dr Flexner was most favourably impressed by Sweden, he says: “The Swedish hospital is as well differentiated as the German or Danish; the demonstrative lecture as competently employed as in Germany or Denmark; the student is in as close contact with the patients as in England, and has greater familiarity with the laboratory.” But this eminence is paid for by a longer curriculum than is demanded by any other country: “the
Swedish curriculum may last eight, ten, or twelve years.” Dr Flexner thinks that the same advantages may be attained by other means, and favours the general adoption of the compulsory post-graduate clinical year. Those who see difficulties in this direction will be interested to note that of 2,452 graduates of reputable American universities of the year 1922, no fewer than 2,265 became interns.

We confess our surprise to find Dr Flexner depreciating the value of oral examinations, and claiming that the written is a fairer method of testing a candidate’s resources. On pages 279-280 he says: “The excessively practical examination of the Conjoint Board in England is an obstacle to scientific training, and the meticulous detail of the American State Board examination, instead of stimulating good work, puts a premium upon dead detail.”

The last chapter of the book on costs commences with the statement that fifteen years ago medical education was supported with “reasonable adequacy only in the Germanic countries of Northern Europe, and especially in the German and Austro-Hungarian Empires.” Those who are familiar with the conditions in different countries will not accept all the statements in this chapter as correct, but many of the figures are vouched for, and are exceedingly interesting. The effect of the war is written all over the chapter, and we learn that Germany has been forced to cut down its expenditure on the universities and institutes by 30 per cent, or more. In England, ten medical schools, whose total expenditure was, in 1912, £61,038, spent, in 1921, £170,491. But “it must be remembered that, at the earlier date, Great Britain was probably doing less for medical education than any other country in Europe. Enormously greater sums will, however, be required in Great Britain to provide modern facilities, and to maintain a competent and well-organised scientific personnel.” In America the budgets have risen, in Johns Hopkins 450 per cent., in Harvard 118 per cent., in Washington University 586 per cent., in Iowa 900 per cent. In Dr Flexner’s opinion the salaries of the full-time professors are far from adequate: “Fifteen years ago, at a maximum salary of 5,000 dollars, the full-time professor of a laboratory subject in the best American medical schools could lead a fairly comfortable life of academic type. A salary of 8,750 dollars would be required to-day—a scale that has been nowhere attained.”

Intravenous Therapy. By W. F. Dutton. Pp. 542, with 52 illustrations. Philadelphia: F. A. Davis Company. 1924. Price 27s. 6d.

The author of this book has succeeded in giving a comprehensive account of intravenous medication in all its aspects. In so doing he has broken fresh ground and has provided a ready means of reference
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for the details, not usually available in text-books, that are occasionally required in the treatment of special conditions. The first part of the book deals particularly with technique and is prefaced by an historical account of the subject and a description of venesection. Special chapters are devoted to the administration of salvarsan and allied drugs and to intravenous anaesthesia. The subject of intravenous therapy in pediatrics is also specially discussed. Over seventy pages are given to the details of blood transfusion and the various methods in common use are fully described and illustrated.

After the description of general and special technique a systematic account is given, in the second part of the book, of the treatment by intravenous medication of a large number of diseases. Over a hundred morbid conditions are discussed from this point of view, and a short description in addition of the clinical features and symptoms of each condition is given.

While the author disclaims any attempt at presenting a complete record of such a wide subject, he has provided a useful epitome of current knowledge on intravenous therapy. Technical procedures are well illustrated and described, and the numerous references to the medical literature, quoted in the text, should prove useful to those who desire further information on particular subjects.

An X-ray Atlas of the Normal and Abnormal Structures of the Body.

By Archibald M'Kendrick, F.R.C.S.E., D.P.H., F.R.S.E., and Charles R. Whittaker, F.R.C.S.E., F.R.S.E. Pp. xxvi + 217, with 388 illustrations. Edinburgh: E. & S. Livingstone. 1925. Price 25s.

As the authors of this atlas state, radiographic interpretation can only be satisfactorily learned from a study of actual negatives, combined, as they might have added, with a sound knowledge of normal and morbid anatomy and the clinical features of each individual case. Unfortunately, there are many who have little opportunity of studying radiographic appearances at first hand, and a collection of nearly 400 radiographs, such as is presented in the atlas, should prove of considerable value as an introduction to the study of X-ray diagnosis. The first 60 illustrations depict normal joints, each joint being shown from several slightly different points of view, while the remaining illustrations are devoted to the more common injuries and diseases in which radiography may be of diagnostic value; the limbs, head, neck, thorax, spine and abdomen being dealt with in the order named. The great majority of the illustrations are clear reproductions of good negatives, and each is accompanied by a brief description indicating in a general way what the picture shows.
The preparation of an atlas such as this is a laborious task, requiring the most careful selection of illustrative cases from an unlimited store of material, and while the authors have succeeded in producing a useful general introduction to the study of radiographic interpretation, we feel that the usefulness of future editions would be enhanced if they would make rather more allowance for the difficulties in the way of the learner studying X-ray appearances mainly or exclusively from reduced prints of negatives, in which much fine detail is inevitably obscured or lost. They might, with advantage, include only typical well-marked examples of the various conditions illustrated and give fuller explanations of abnormal appearances. We would suggest also that a series of radiographs illustrating the appearances of bones and joints at stated intervals during the growth period would be much more valuable than a multiplicity of views of adult joints from slightly different focus points, for these show only trifling variations in appearance, of no real significance. Only normal focus points should be used and these should be precisely defined in every case. Radiographs of joints freed from soft parts and of museum specimens are of limited value as guides to the interpretation of appearances in the living subject and might well be excluded along with all cases in which the interpretation is doubtful, of which there are not a few in the atlas.

Taken as a whole, the atlas is of undoubted educational value, and should prove useful to the learner and to those who have not access to the records of an X-ray department. It is exceedingly well printed on good paper and the publishers are to be congratulated on the high quality of their work.

*Human Constitution: A Consideration of its Relationship to Disease.*

By George Draper, M.D. Pp. vi + 345, with 208 illustrations. Philadelphia: W. B. Saunders Company, Ltd. 1924. Price 37s. 6d.

This is an interesting book worth perusal, the forerunner, the author tells us, of a projected series in which he attempts by anthropometric methods the reincarnation of the old constitutional theory of disease.

"Disease" he writes in his opening chapter, which gives the gist of his ideas, "arises from the interplay of dynamic forces inherent in the individual and present in the world about him." . . . "Constitution . . . is that aggregate of hereditary characters influenced more or less by environment, which determines the individual’s reaction, successful or unsuccessful, to the stress of environment." It seems to the reviewer that the first is equally a definition of "health" unless the stimuli become abnormal, and the second is an unnecessarily long definition which might with advantage
be shortened into “aggregate of hereditary characters.” Man’s individuality he views as a Japanese screen composed of four panels, each of which taken separately seems hieroglyphic, but, fitted to each other, constitute the perfect whole. His four “Panels of Personality” are the individual’s anatomy, physiology, psychology and immunity. The author seems to the reviewer to impeach many (shall it be “most?”) American clinics when he describes each set of panels as being studied separately and “stacked in a corner” and an intelligent investigation of the complete case frustrated. We have heard of a patient being passed from hand to hand until each specialist has done his bit, and have marvelled at the possibility of a master-brain correlating the facts; and we have returned somewhat thankfully to what we hope will long pertain in this country, the guidance of the family doctor. The well-trained general practitioner who knows his patient, his patient’s relatives for a couple of generations, his patient’s environment, companions and amusements, a general practitioner who knows his limitations, and who knows when and where to seek advice or assistance, is an infinitely safer guide to the invalid than the best clinic with a delegated specialism. But Dr Draper does not make that mistake. He draws all his four panels himself and fits them together for individual study. And if to the uninitiated like ourselves, anthropometry seems an unlikely solution of the difficulty, a tricky and tedious method requiring specially trained operators (according to his preface he seems to have had ten of them), the book must be consulted to see how it is done and with what definite results. The measurements are arranged towards the end of the book in 105 tables, and include detailed measurements and anthropological details of patients suffering from gall-bladder disease; gastric and duodenal ulcer; nephritis; pernicious anaemia; asthma and tuberculosis; these diseases being chosen because the diagnosis can be verified with certainty.

The Pneumococcus and Pneumococcal Infections. By L. COTONI, C. TRUCHE, and MILLE. A. RAPHAEL. English Edition by D. S. Page and Eva Morton. Pp. viii + 218. London: John Bale, Sons & Danielsson. 1924. Price 16s.

This important monograph is divided into three sections. The first deals with the pneumococcus group itself; the second with its habitat, and diseases of pneumococcal origin; the third with the treatment of pneumococcal infections.

The French bacteriological workers have always retained a certain individuality in their technique, and, perhaps consequently, in their views. Their criteria, for example, of what constitutes a pneumococcus and what a streptococcus, differ from those advocated by the American
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workers. It is obvious, therefore, that differences of opinion as to the properties of certain strains may arise purely from different modes of classification. The French workers include in the pneumococcus group strains which here and in America would be classed as streptococci.

It is, however, in the section by Drs Nicolle and Debains, dealing with the classification of pneumococci by agglutination tests, that the most heterodox views are expressed. They do not consider the agglutination test of value in the determination of bacterial species, and regard each strain as containing a number of antigens, varying from one upwards. The fact that they used for their tests on strains not agglutinated by the type sera, emulsions which were acidified, boiled, and neutralised, suggests that their technique might be responsible for the production of altered protein acting as a non-specific antigen. Apart from this, their views on the question of what they call “agglutination types” in relation to the production of disease are original and demand careful attention.

In the third section, they discuss serotherapy, and, from cases treated, they conclude that “in addition to its obvious action in experimental animals anti-pneumococcal serum is undoubtedly efficacious in man.” Drs Page and Morton deserve thanks for their excellent translation of this book.

Practical Surgery Illustrated. By Victor Pauchet. Translated by F. R. B. Atkinson, M.D., C.M. With an Introduction by Sir Charles Gordon-Watson, C.M.G., F.R.C.S. Vol. I., pp. xvi + 293, with 217 illustrations; Vol. II., pp. xi + 252, with 199 illustrations; Vol. III., pp. ix + 248, with 308 illustrations; Vol. IV., pp. xiii + 255, with 307 illustrations. London: Ernest Benn, Ltd. 1925. Price 18s. 6d. per. vol.

The operative procedures adopted by Pauchet in his surgical practice have been clearly depicted by a series of pictures drawn from nature by S. Dupret, the illustrator of Testut's Anatomy. A wide range is covered both in general surgery and in gynecology. The work is rendered still more comprehensive by the sections contributed by Dujarier on the operative treatment of fractures, Sicard and Robineau on radicotomy, de Martel on craniectomy for cerebral tumours, and Faure and Rubens-Duval on cancer of the cervix uteri. There is no definite order of subjects dealt with, and abdominal surgery, which constitutes the greater part of the work, is scattered irregularly throughout the four volumes. Many of the methods are novel and the opinions expressed are interesting, though not all will find general acceptance.

It is noteworthy that, with few exceptions, local, spinal, and splanchnic anaesthesia are employed in preference to general anaesthesia.
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In cases of inguinal hernia the peritoneum is opened above the neck and the sac everted from the cord. In cases of appendix abscess, the cavity is washed with ether and the appendix is left undisturbed until infection has subsided. In congenital mega-colon, total colectomy is recommended in the majority of cases, as it has been found to be better tolerated than partial colectomy. The "open" suprapubic operation for enlarged prostate he considers will supplant the Freyer operation. The perineal route is preferred in the fat, the cardiac, and the dropsical. Perhaps the most helpful and interesting sections are those dealing with the stomach and duodenum.

This is an original and interesting work, and one which is a pleasure to study on account of the remarkably clear illustrations.

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Encyclopædia Medica. Second Edition, Vol. XIII., Tularæmia to Zinc. Edited by Alexander Goodall, M.D. Edinburgh: William Green & Sons. 1925.

This volume completes a very large and successful undertaking. It is a monument to the enterprise of the late Mr Charles Green, and the wide outlook of the late Dr Ballantyne, neither of whom, unfortunately, lived to see the fulfilment of the plans they jointly made. Most of the articles in the volume have been rewritten, including that on Varicella, from the pen of the late Dr Claude Ker, whose untimely death has deprived Edinburgh of one of its most trusted workers. Three new papers appear—"Vitamines" by Marshall Findlay, "The Treatment of Diabetes" by C. G. Lambie, and "Respiration" by Whitridge Davis. We congratulate the Editor and the Publishers on the successful conclusion of the Encyclopædia.

Elementary Anatomy and Physiology for Nurses. By H. Clifford Barclay, M.D. Third Edition. Pp. xii + 411. London: Baillière, Tindall & Cox. 1924. 12s. net.

Sympathy must be extended to anyone who writes a book on anatomy and physiology for nurses, and sympathy also to the readers who are expected to learn from print about subjects which nobody can understand by reading alone. But as the nursing profession insists on this kind of instruction, which appears to the reviewer to be without educational value, they will find in this book a sufficiently comprehensive guide. It is to be hoped, however, that any teacher using it as a text-book, will tell his pupils to skip the passages about minute