Book Reviews

Anatomy as a basis for medical and dental practice. Donald Mainland. New York: Paul B. Hoeber, 1945. Pp. xvii + 863. (Illustrated.) $7.50.

This textbook appears at a truly opportune time—a time when its subject matter is being extensively reviewed (and occasionally reviled) and debated (and not infrequently debased) by thoughtful, and thoughtless, people in and out of the teaching profession generally and by "anatomists" in particular. When these views are examined with somewhat more objectivity than is apparent in their preparation, one is tempted to draw an oversimplified conclusion that anatomy is successfully taught, by whatever method, only by good teachers—that, whatever the method, the bad teacher is faced with a hopeless task. One inescapable fact, however, emerges from the polemic: Anatomy, which a century ago was the most important subject of the preclinical years, faces a turbulent future and the mettle of its teachers is to be put to rigid test; classically a study of the dead, anatomy must be more closely related to the living. Many features of anatomy make it a uniquely difficult subject. For example, it lacks a gradual methodical buildup; the student is immediately plunged into the center of an ocean of material rather than being permitted to wade in from an introductory shoreline, as, for instance, in organic chemistry—hence the particular need for a well-oriented text. The effort of any anatomist to provide such is worthy of the most careful scrutiny; that offered by an experienced teacher and an anatomist of broad training demands thoughtful and open-minded consideration.

That Dr. Mainland is keenly aware of the present state of flux of anatomy is evident from his previous writings and is again emphasized in the earliest pages of this book. The author is of the obvious conviction that changes, both in principles and in methodology, are not only coming but are badly needed and should be welcomed by the profession. He advises us to look upon the reduction of allotted time, not with alarm, ". . . not as a matter of regret, but as a challenge . . ."; to recall that the chief function of medical and dental undergraduate education is to teach students to educate themselves; to face the fact that a large proportion of sensibly taught anatomy is practical anatomy and that, therefore, clinical problems must be introduced, though not pursued beyond the point necessary properly to illustrate the matter in hand.

The avowed purpose of the book, as stated by the editor of the Medical Student Series, of which this is a part, is to provide a ". . . full-bodied 'student' textbook, presenting what the student has time to read, at a price he can afford to pay." If the reader concludes from this that the book is an inexpensive substitute for the standard type text ("the old-fashioned compendium," as Dr. Zapffe refers to it), he will be wrong on two counts: the price is not low, and the editor himself tells us that it ". . . obviously will not supplant the larger text." That the latter is true is immediately evident upon examination of the body of the text.

The book is divided into three major sections. Part I, entitled "Aims and methods," is a short introductory chapter (26 pp.) which seeks to orient the reader by giving him some history of the subject, ancient and recent, and by indicating the position of anatomy in medical education and practice. Part II, called "General anatomy," consists of 124 pages of systematics. The body is first examined as a whole, statistically as well as physiologically, and then its classical parts—bones, muscles, nerves, etc.—are discussed, not individually, but generally, with a view to establishing fundamental principles. Part III, comprising the main portion of the book, consists of eight chapters (586 pp.) of regional anatomy, except that within each chapter covering a particular region material is approached systematically; thus, in the section on the upper limb, bones and movements are discussed first, with skin, muscles, blood vessels, nerves, etc., following in that order.

Seven appendices (47 pp.) give much adjuvant information on such diverse matters as radiology, reading and writing, postnatal ossification dates, and normal organ weights. Scattered at appropriate intervals throughout the main portion of the text are questions calculated to direct the student's attention to the practical application of anatomical knowledge. While a number of these questions, individually taken, are not above criticism, and many are perhaps beyond answering in the dissecting room, as a whole they offer the student the opportunity to convert immediately a rather disjointed mass of anatomical facts into a useful body of serviceable information. Answers to these questions are provided in the back of the book. An exceptionally fine classified list of references is followed by the usual index. Only a relatively few (61) schematic line drawings are included in the book, since it is clearly meant to be used in conjunction with an atlas. It might be pointed out here that Fig. 52 should be corrected to show postganglionic parasympathetic fibers to the heart.

A cursory examination of this book gives the erroneous impression that it represents merely an adumbration of anatomy, but whereas most of the written text is presented in a more or less synoptic form, the book is in no sense an expanded syllabus. While it omits much of the irrelevant detail of the standard descriptive anatomical text, it skillfully introduces recent pertinent advances in both the structural and functional aspects of the subject. It should be made clear, however, that if the reader seeks a concise, easily located, and reasonably complete and accurate description of a particular structure, he must perforce turn to the "old-fashioned compendium." If the student desires information on the external maxillary artery and turns to the book under review, he finds it indexed only under the B.R. term: *Artery, facial*; he is then directed to four widely separated pages, where the

vessel is referred to, in sections, as the *external maxillary (facial) artery*. Such imperfections, if they are considered such, are patently inherent in the form of presentation used in this book. It may be well to note at this juncture that the author does not feel bound by any single official terminology. B.N.A. terms predominate, though given in English form, but ". . . when B.R. terms are obviously better they are used, and B.N.A. terms are given in parenthesis. A few other commonly used terms are mentioned." Such a liberal attitude toward authoritative nomenclature undoubtedly has its merits, particularly in an effort to get away from the stilted, stylized phraseology of the majority of texts; however, this reviewer deplores the sanctioning of such terms of direction as "headward" and "tailward."

Rather loosely-worded sentences, often introductory in nature, occur here and there throughout the text. To cite a few examples: "Right and left pleural cavities contain their respective lungs"; "The pleura is smooth and glistening because slightly moist, to minimize friction of lung movement"; "Nerve fibers (autonomic) send no messages to consciousness"; "Vagi are largely food passage nerves. Therefore they supply air passages also"; "The fluid containing the ovum is squirted by the rupturing follicle directly into the tube which sucks it toward the uterus." Also, in a book where purposeful omission of nonessential detail is an expressed policy, it is surprising to come upon material of such dubious value as a description of Gudden's commissure, an excessively long discussion of Wolff's law, an enumeration of the constituents of tartar, and the extraordinary mnemonic which reads: "'Sphincter' and 'sympathetic' both begin with *s*; therefore one might expect them to be linked; but they are not." While it is well recognized that the introduction of controversial material may, in selected instances, be quite justified and stimulating, it is difficult for the present writer to see the virtue of including in an anatomy text statements of debatable relevancy, some of which are dangerously dogmatic, if not misleading, and which deal with highly disputatious topics—for example: "Mental defect indicates structural defect of the brain . . ."; "In [heart] disease myocardial vessels grow into the cusps; therefore when rheumatic valvular disease is found, the physician should conclude that the myocardium is also infected . . ."; "Stimulation . . . in man shows that the motor area is not always confined to the precentral gyrus. . . ." An inconclusive discussion of the events occurring in cardiac hypertrophy and dilation, following valvular lesions, and an unconvincing dismissal of the Purkinje fibers as significant constituents of the conducting system of the human heart might be added to the above list.

Outright contradictions are rare in this book, but one might easily be led to interpret as such these sentences touching upon the mechanics of respiration: "In expiration . . . the main factor is perhaps elastic recoil of the lung . . .," and, on the next page, "Expiration results largely from weight of the thorax, spring-like qualities of costal cartilages, and some contraction of anterior abdominal wall muscles."

As is true of J. C. B. Grant's excellent *Method of anatomy*, the only text remotely similar to the book under review, attention is directed primarily toward fundamental principles and away from superfluous details. The student is properly urged to conduct his dissection in a spirit of investigation. In fostering the cultivation of independent powers of observation and in making clear immediately the value of information gained, this book goes a long way in encouraging the student beyond what Mall referred to as the first and easy step of anatomy—the dissection of the body—to a deeper, more practical, and synthetic mental impression of it. No one text can hope to satisfy all conditions demanded by all instructors in all courses, and to prognosticate the reaction of students to a new text is a task for the soothsayer, not for a mortal reviewer. Final test of any text lies, of course, not in its review, but in the crucible of the classroom; this book most certainly deserves that test and the thanks of the profession must go out to this—and indeed to any—effort to rid the teaching of anatomy of ". . . the pernicious effect of dogmatism . . . more manifest in it than in other medical sciences."

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Your eyes have told me. **Louis H. Schwartz. New York: E. P. Dutton, 1945. Pp. 208. (Illustrated.) $2.75.**

This book is not for the scientist who wants precise and accurate information and has the mental discipline and intelligence to understand it. It is written in a free and easy style for the layman, and since the information it contains outweighs the misinformation, it will probably be of benefit to the lay reader. In the Preface and Epilogue the author records his intentions concisely: "The purpose of this book is to give the reader a better insight into one special branch of that vastly absorbing maze of perplexities, the human body." Between these two portions of the book lie 31 chapters of popular science writing, frequently careless, usually overdramatic, generally trite, too often gullible.

"The Siamese Twins" is a discussion of sympathetic ophthalmitis; "Cherchez la femme," of gonorrheal ophthalmitis; "Popeye Clinic," of exophthalmos; and "The Greeks had a word for it," of nystagmus. The ophthalmologist is shocked to find a visual acuity of 20/50 described as 40 per cent of normal, and the psychiatrist must be disturbed to read of hysterical blindness, usually a symptom of some deep-seated difficulty, being treated with a placebo and some strong suggestion. The discussion of cross-eyes serves only to confirm most of the layman's misconceptions regarding this condition, and in the extremely confused chapter on color-blindness the author is as gullible as any layman regarding the types, classification, diagnosis, and possibilities of curing the condition.

If we accept the proposition that the best way to fight rackets and charlatanry is by educating the public, then