Turner and Mivart on Anatomy. — In ancient days, when observers of nature were few and books comparatively rare, men learned as they could, not as they would. Here and there a few honoured ones, favoured by wealth, had the opportunity of attending lectures on certain given subjects, these lectures being delivered by men who had, as far as lay in their power, studied the subjects which they taught. In those days it was not permitted that every observer should be also a lecturer and teacher. Many, indeed, of the latter class of men, men highly gifted with faculties and powers of observation, no less gifted than some of those whose names are traditional in the history of anatomical science now, have died, and their knowledge with them, unknown and unhonoured, simply from want of opportunities of making their knowledge public. The names of great authors are few indeed, and with few exceptions these very authors would probably have remained unknown had it not been for circumstances in a great measure accidental. Claudius Galenus, as great a theorist as ever lived, would never have attained his wonderful reputation had he been as poor as many of the medical students are of the present day, despite the increased facilities and advantages of studying medicine and its collateral sciences at home and abroad. His great name, though dimmed by the irresistible light of truth, had never risen but little beyond zero if he had studied only under the anatomist Satyrus, the Hippocratic disciple Stratonicus, and the empiric Æschriion. The then famous school of medicine at Alexandria was the birthplace of Galen’s reputation. The same may be said of the less successful though far better anatomist Bartholomeo Eustachio, an accomplished classic and a student of medicine at Rome. The

1. An Introduction to Human Anatomy, including the Anatomy of the Tissues. By William Turner, M.B., Professor of Anatomy in the University of Edinburgh. Part I.
2. Lessons in Elementary Anatomy. By St. George Mivart, F.R.S., &c.
influence of Cardinal Borromeo did much to secure for him the chair of medicine in the Collegia della Sapienza. Fallopius, though an able and talented man, enjoyed the patronage of Cosmo I, the first Grand Duke of Tuscany, and the unlucky Vesalius was not less favoured. Thus, many deservedly great teachers, whose works have been handed down to posterity, might, and probably would, have remained obscure and unknown if they had been less blessed by circumstances beyond their control. But modern anatomists are no less indebted to these teachers for utilising and promulgating their knowledge, little comparatively as indeed each contributed.

The long array of familiar ancient as well as modern names, e.g., Albinus, Boerhaave, Casser, Fabricius, Haller, Haase, Lancisi, Morgagni, Meckel, Neubauer, Pacchioni, Santorini, Soemmering, Scarpa, Wrisberg, Weitbrecht, and a host of other able anatomists, illustrate the fact that anatomical knowledge has been perfected to its present status very slowly. Progress does not seem to have been coincident with the opportunities of study. The history of anatomy is sadly defaced by the evidence of imperfect and inaccurate observation. Authors and teachers have been too eager to see and describe tissues or organs as previous observers had done, or to drag themselves into notoriety by repetition, in many notable instances being as wide of the truth as the assertions which they assumed to deny.

The dissipation of the old and well-nigh worn-out ideas that all animals are especial and independent creations has given rise to a new era in the study of anatomy. Modern teachers know well that it is impossible to understand human anatomy from a study of the human subject alone. If, then, it is impossible, as assuredly it is, is it not a mistake to continue to teach it in the old-fashioned method in the medical schools?

Students generally have a great objection to the introduction of comparative in the course on human anatomy. This objection is based upon ignorance and prejudice partly, but is mainly due to a bad system of teaching.

While ignorant of everything pertaining to anatomy in general, the student commences his knowledge of one of the most comprehensive sciences by learning the bones of the human body. Probably a few casual remarks are made at the introductory lecture to the course on the similarity of the human to the vertebrate skeleton, and then for once and for aye the comparative elements are avoided during the course. The thinking public outside the medical schools exhibit far greater interest in natural history, comparative anatomy, and, in short, science generally, than those who have advantages of study unequalled
in the history of the world—the student-factors of the medical profession.

It is now several years since Professor William Flower, the talented and enthusiastic Conservator of the Hunterian Museum at the Royal College of Surgeons, brought out his inimitable book on the osteology of the mammalia. It was thought at the time, and suggested to teachers, that this work would inaugurate a new era in the teaching of skeletal tissues. But instead of this valuable text-book usurping the place of the volumes on "Human Osteology," its use is confined to a few science-teachers and to some hard labourers in the paths and fields of science, such as the pupils taught by Huxley at South Kensington Government Science Schools. The proper study of mankind, it is often asserted, is "man." An egregious fallacy so far as concerns the study of man's physical organization. A mere student of man, and man's anatomy, is a narrow-minded and ignorant individual at the best. The present elevated status of man, at the summit of the great cone of organic and structural existences, has not been arrived at suddenly. Whatever, then, can throw light upon the means by which, and through which, this status has been arrived at must be a source of interest and a necessary knowledge. One might with equal justness state that a thorough and comprehensive knowledge of the hydroid polypi could be derived from a study of a single specimen of the great family, as infer that human anatomy can be learned from the human subject alone. It is impossible. Under such conditions the whole fabric is a vast and uninteresting desert of unreadable and non-understandable factors. Progressive knowledge is impossible from this degraded standpoint, though the commonly accepted one. The sooner those in authority in our great medical schools recognise the fact the better—that the method now adopted of teaching human anatomy is a bad one, and calculated to thwart true progress. The system of teaching by lectures has been inoculated into every medical school in the universe, has been persisted in, and is still maintained. In some measure it is of service, but it is as at present carried out a sad waste of valuable time and knowledge. What can a lecturer tell to his class on human anatomy in an hour that they cannot obtain from one of the scores of text-books in half an hour? Nothing! Then it is a sheer waste of time and money. Human anatomy never can be or will be taught as it ought to be until it becomes the last, instead of the first, of the subjects which a student has to learn. The method of teaching first, we believe, adopted by Professor Huxley at South Kensington, is the method which must ere long be adopted in every medical school. If it is not,
then we shall have the anomaly of schoolmasters being far more conversant with general and special anatomy, and science generally, than medical men are. Huxley begins with the Torula and Penicilium, progresses through the various grades of invertebrate and vertebrate animals, and ends with man. The medical schools begin with man, and end with him. The result is that their students know little, or nothing worth knowing, of the very subject which, in the future, they profess to understand—health and disease.

It would be a better and far more instructive method to commence the study of anatomy from the dog; but it would be still better to begin with structures as low in the scale of nature as possible, and to substitute demonstrations for lectures. Make the students trust more to themselves by insisting upon sketches or diagrams and self-written descriptions, to be afterwards corrected by the teachers, and then the three great elements of progress will have been mastered, viz., how to observe, how to describe, and how to learn.

Mivart's little book of "Lessons in Elementary Anatomy" is a step in the right direction. It is as beautifully as it is plainly written. The author tells us the book was "intended for teachers and earnest students of both sexes not already acquainted with anatomy." There can be no doubt that much will be learned by even a casual perusal of the book—information of the most valuable kind. It is highly deserving the commendation which has been so generally bestowed upon it, and will stimulate enthusiastic naturalists to push their studies still further into the delightful regions of structural anatomy.

Professor Turner's book "has no pretence to be an exhaustive treatise on the subject." It is "an exposition of the principles on which the human body is constructed." We like books that have no pretences about them. Such is the work before us; and though confined more exclusively to human tissues, is by far the best, the clearest, and most readable book we have ever perused. It is a book that every medical student should read; and it is a book that every non-medical student might read with considerable advantage. The public owe much to the publishers for suggesting, and to Professor Turner for acceding to the suggestion, of reproducing the article, first written for the new edition of the 'Encyclopædia Britannica,' in a separate state. Professor Turner has as inimitable a style of writing as he has of demonstrating the tissues with which he is so familiar. Few men can methodise in so clear and masterly a style, describe so clearly, and, on the whole, produce so cheerful and readable a book.