under the foundation is sufficiently large and weighty so that no extraneous question should be brought into this discussion, but most of you must have observed with considerable interest, if not apprehension, the view adopted by a sister state in respect to private benefactions and the resulting indirect private control over public institutions. The plans of the Carnegie Foundation have commended themselves to us all, and the mode of procedure under these plans has, up to the present, been susceptible of no serious objection from the institutions which are cooperating or from the general public. Nevertheless, a very large element in public opinion is doubtful of the desirability of subjecting public education to any form of corporate influence which is not itself responsive to public opinion. Lest this feeling should grow so as to jeopardize the usefulness not only of this but of many instances of private benefaction, the trustees of the Carnegie Foundation, in the judgment of many disinterested and sympathetic observers, should be very much on their guard against any apparent transcendence of their real functions. In a recent report of the foundation a proof may be found of the delicate nature of the ground on which the foundation is treading in its official publications. Broad questions of educational administration must be to some extent raised and discussed in connection with the immediate problems of the foundation itself, but that a decided attitude should be taken by its officers as regards a problem not vital to its purposes, as was done recently in the matter of federal appropriations to education, will seem to many an act of doubtful propriety, and likely to arouse criticism otherwise unnecessary, if not to bring about an attitude of real hostility on the part of the public toward the work of the foundation.

"In the situation which now presents itself, the trustees of the Carnegie Foundation will certainly welcome an expression of opinion from all of the accepted institutions cooperating in its work, and therefore a motion is herewith made that the executive committee of this organization, representing the different faculties of the University of Minnesota, be directed to submit to the executive committee of the Carnegie Foundation for the Advancement of Teaching that the service pension as originally planned and put into effect was one of the most admirable features among the many projected by the foundation; that the limitation now imposed is a serious impairment of its scope and nullifies very largely the beneficent object contemplated; that we sincerely regret the action of the trustees in their announcement of the practical withdrawal of such pension; that we deplore the lack of confidence which has resulted therefrom; and that in our opinion the service pension should be restored in a form not essentially different from its original."

In conformity with the above mentioned the executive committee will draw up a set of resolutions and forward the same to the trustees of the Carnegie Foundation at an early date.

SCIENTIFIC BOOKS

Précis d'Embryologie Humaine. Par F. TOURNEUX. Second edition. Pp. 589, 248 figures. Paris, 1909.

This work, like McMurrich's "The Development of the Human Body," is a text-book for the student of medicine. The two books have the same general character, being brief, concise and accurate statements of the outlines of human embryology. They are of almost the same size for, although the pages of the latter are somewhat larger, the smaller type of the former allows a greater compactness.

Tourneux has dispensed entirely with a bibliography, but has more than compensated for its absence by an historical treatment of the subject. Throughout the book he credits to each author, by putting his name and the date of the work in parentheses, his particular contribution to the subject. In this way the author succeeds admirably in giving the student an insight into the history of embryological research and in preventing him from feeling that the book is an ultimate authority.

The book begins with an introduction upon the history of embryology which the author divides into three periods: morphological, his-

tological and phylogenetic. He believes that the last period extends to the present time, but to the writer the interest in theories of vertebrate descent, and the belief that the "law of von Baer" can yield a fundamental conception of the history of animal forms, seem to have given place to the desire to understand the principles of growth and of inheritance.

The first chapter, upon the germ-cells, maturation, fertilization and segmentation, is of a general and comparative nature and includes an exposition of the theories of the significance of maturation and fertilization, and of the problem of heredity. It does not contain, however, any reference to Mendel's work or to that of his successors.

In order to have a consistent and continuous description of the early stages of development, Tourneux devotes a long chapter—slightly more than one sixth of the text proper—to a description of the history of the ovum of the rabbit up to the time of the establishment of the body-form. This account is very clear and convincing, and is particularly acceptable because the author does not interrupt its continuity by making a patch-work of fragments of the history of the ova of many vertebrates.

The third chapter, which completes the first part of the book, contains brief accounts of many of the best preserved early human embryos.

The second part of the book is divided into thirteen chapters, which may be subdivided according to size into three groups: those upon the digestive and urogenital systems are long, having 79 and 74 pages, respectively; those upon the nervous, locomotor and circulatory systems, and the fœtal envelopes are of moderate length, about 40 pages; and finally, those upon the respiratory system, suprarenal organs, the skin and upon the organs of taste, smell, sight and hearing are short. The treatment of the digestive and urogenital systems seems disproportionately long, and the section upon the voluntary muscles, consisting of about thirty lines in the chapter on the locomotor system, is ridiculously small. Otherwise the discussion of the several organs and organ systems is excellently proportioned. There is an index and an appendix upon the length of the period of incubation or of gestation in several birds and mammals.

The failure to adopt the Basle anatomical nomenclature, and even the occasional omission, in an extensive series of synonyms, of the name used in this nomenclature, seem to the writer to be the great fault of the book.

The figures, 248 in number, are well chosen and are excellently reproduced. The use of only a very few diagrams is commendable. The book deserves a thorough success.

Leonard W. Williams

Broad Lines in Science Teaching. By F. Hodson. New York, Macmillan Co. 1910. 8vo, pp. xxxvi + 267. $1.25.

This book consists of a series of essays by a number of writers, edited by Mr. F. Hodson, of the Bedales School at Petersfield, England. The papers all deal with the teaching of science to boys and girls of secondary school age; and the editor's object has been "to cover a wide field, to achieve, through variety of the contributor's experience, a variety of presentation, and so to convince the reader of the many-sided human value of science in modern education."

The introduction is by Professor M. E. Sadler, who calls attention to the necessity for a more careful study of the methods of teaching science. He says (p. xix):

> Science has secured a place in the curricula of the higher schools, a firm place and respectful recognition; but scientific method and the spirit of science have not yet influenced the whole of the intellectual life of the schools, have not yet remolded the ways of teaching in other than what, in the narrower sense of the words, are called scientific subjects.

He then reviews the essays that follow, and draws some general conclusions from the study of the entire collection. As distinct marks of successful teaching of science he mentions four as being most essential—an alert interest in things seen; patience and exactitude in observing, verifying and recording them; a disposition to brood over new