tries. A dictionary for the use of the medical profession in this country must be prepared along broader lines and must include many definitions which we search for in vain in those of other countries. This makes the task much more difficult, taking into consideration the wonderful progress of medicine and its collateral sciences in the last few years. Only a physician of the highest professional attainments can undertake such a work, and the publisher must be congratulated on entrusting this work to such a man as Dr. Cattell. His editorial experience as editor of *International Clinics,* his laboratory work in some of our best medical institutions and his high standing as pathologist and practitioner make him eminently fitted for the task. The immediate predecessor of the present book was Lippincott's "Medical Dictionary," published in 1897 under the editorial collaboration of the late Professor John Ashhurst, Professor George A. Piersol and Professor Joseph P. Remington. For this edition Dr. Cattell had the able assistance of other collaborators to whom he gives proper credit in the preface. One will understand what an amount of painstaking labor was involved in the preparation of the present work when we state that Dr. Cattell devoted five years to its completion. The medical lexicographer is generally confronted with such an "embarras de richesse" regarding his material that it taxes an author's greatest editorial ability to overcome the difficulty satisfactorily. But we must admit, that our author, by a wise economy in the grouping of words, has not only solved this problem, but also succeeded in such a way that his medical dictionary contains more words than any other. For instance, all words which begin with the same initial element or are of the same etymological origin are grouped together. This space-saving method has made it possible to insert so many new words and to give the dictionary its encyclopedic character. The etymology of words derived from foreign languages is always given, not, however, immediately after the word, but after the definition, following here the arrangement of the "Standard Dictionary." In this connection we may remark that the printing of the Greek alphabet with its proper pronunciation in English seems extremely appropriate, taking into consideration the large number of physicians who are not such apt Greek scholars as Dr. Achilles Rose. Eponymic terms are profusely given, and at the same time accurately and concisely, which is a very important matter. The cross-references are ample and are one of the most useful features of the book. The author's aim to furnish the medical student, the practitioner and the laboratory worker with a dictionary of moderate compass and at a reasonable price is more than fulfilled. It must indeed be very gratifying for the author and for the publisher, that this book, which was first published in August, 1910, met with such success that it had to be reprinted within three months after publication and issued in a new edition within a year. The new edition is materially increased; about 500 new words have been inserted, and 71 new illustrations have been added.

Take it all in all we do not hesitate to recommend Lippincott's "New Medical Dictionary" as an indispensable tool for the medical profession at large.

Felix Neumann
Surgeon General's Library,
Washington, D. C.

The Meeting of the Association of American Universities at the University of Chicago[1]

Nearly every one of the twenty-two universities constituting this association was represented at this meeting, the larger number of them by its president and at least one delegate, as was the case with Minnesota.

The first paper presented was by Dean Greene, of Illinois, on the question of the relative advantages of organizing university departments on the usual plan of permanently retaining a single head *versus* the Harvard plan of a departmental committee under a chairman.

It was shown that while during the period during which a department is small and in-

[1] From the *Minnesota Alumni Weekly.*

creasing rapidly in size a single permanent head probably makes for efficiency and continuity of policy, a far different set of influences come into play after a department becomes large enough so that it contains or should contain a number of men of first-class ability and rank. Such men will not be content to remain subordinate to any departmental head, not because they themselves desire to discharge the time-consuming administrative duties of the head of a department, but because of the subjection involved in occupying a subordinate position. These inherent difficulties of administration are avoided by the plan of a departmental committee, whose chairman may be changed when circumstances require it. Sufficient independence may be secured to the individual professor on this plan and in a large department sufficient continuity of policy as well, without the deadening inflexibility which often accompanies the administration of a conservative permanent head. The implied conclusion of the paper was that our larger departments ought one after another, as they became full grown, to change their organization and adopt the committee plan in order that full advantage may be taken of the talents of the younger members of the departmental faculty in the way of administration, etc., and thus permit older men to devote more time to productive scholarship. There seems to be no reason why both plans of organization should not coexist in the faculties of the same institution.

The second paper was by President Judson, of Chicago, as to how the teaching time of professors may be most advantageously distributed between college work, both elementary and advanced, and graduate work. This paper treated more at length the questions which President Judson discussed in his address at the inauguration of President Vincent, insisting that each professor should be used mainly for those activities for which he is best fitted, but that young and untried men be early given a reasonable opportunity to devote some small portion of their time to advanced work by which they might make good and demonstrate their aptitudes of advanced work, and when they have so demonstrated their fitness for such work it is time to give them larger scope.

Many side questions were treated in the paper, among them the practical difficulty the administration has in suitably appraising the relative importance of the various researches for which appropriations are asked. It too often happens that the personality of the applicant and the eagerness of his request or some other adventitious circumstance enables him to obtain undue aid for his work while more meritorious work is unable to get financial assistance. A suitable buffer between those who ask for aid and those who grant it is very much to be desired.

This gave opportunity to explain the unique plan just adopted at Minnesota by which all requests for aid are submitted for consideration to a research committee and grants are made on the basis of its recommendations. These two papers and the accompanying discussions occupied the two sessions of Thursday, October 26. A reception followed in the evening at the residence of President Judson.

The final paper by President Lowell, of Harvard, treated the disadvantages of having college and university degrees granted on the basis of examinations which cover the several courses singly, instead of having them depend on comprehensive examinations covering broad subjects and embracing a number of courses.

It was in the early days the practise to confer the degree of B.A. after a single final examination on the whole course. Biennial examinations were the rule at Yale and elsewhere in the past generation; and, later, annual examinations were held. President Lowell insisted that such examinations, in which the questions set are not framed by the instructors themselves, are essential to high scholarship, be the examinations for academic degrees or professional degrees. Such is the practise in the English universities where the first duties of professors have to do with examinations rather than with teaching. Indeed the University of London was created merely as an examining body. It was shown in the discussion that any such change in the character of degree examinations in America would

profoundly influence the ideals, the methods and character of academic and professional education.

The concluding session of the meeting was an informal conference of deans of graduate schools for discussion of questions of policy and administration for mutual enlightenment and better understanding of their common problem, how best to foster the most advanced work done in our universities. Such a conference as this had been held at previous meetings and had been found to be so necessary that a number of deans of graduate schools were in attendance at their own expense who were not delegates to the association. The questions arising in the administration of graduate schools are so new and important that it is extremely desirable to put the united wisdom and experience of all at the disposal of each, as can be accomplished in no way so well as the free and informal interchange of a round table conference. The meeting as a whole was most useful in bringing together and helping to fuse into a consensus of opinion and action the men controlling the leading universities of the country.

The annual report to be published later will contain the papers and discussions in full, excepting the conference of deans.

H. T. Eddy

SPECIAL ARTICLES

THE RÔLE OF DIFFERENT PROTEINS IN NUTRITION AND GROWTH

Interest in the study of the problems of nutrition has largely been coincident with the development of the chemical aspects of physiology, in distinction from the physical and mechanical phenomena which earlier attracted the attention of investigators. The subject of nutrition has, in large measure, been considered in the past from what might be designated as a statistical standpoint. The balance of income and outgo of energy and matter, nutritive needs and dietary standards, and the effect of external factors on these, are illustrations of the type of questions which has called for discussion. With the progress in the study of physiological chemistry have come important additions to our knowledge of the make-up of the foodstuffs and of the real significance of the processes which take place in the alimentary tract. The conception of digestion as a simple act of solution has evolved into that of an intricate and carefully regulated chemical transformation. The intermediary changes which characterize the metabolism of food materials after absorption and incident to the real nutritive reactions of the body within its tissue cells have at length become the subject of experimental inquiry.

With this development has come about an appreciation of the *specific* rôle of foodstuffs. Various incidents have favored this trend of physiology. The study of enzymes and their striking specificity has served to emphasize the necessity of digestion before the nutrients can satisfy their purposes. Observations on the unique responses of various parts of the alimentary tract to different kinds of chemical compounds have brought to light the remarkable interrelations of the secretory and motor functions of the digestive tract and their dependence on special (chemical) stimulants. But more important than all this, perhaps, have been the disclosures of the past decade in respect to the chemical structure of the so-called proximate principles, and the proteins in particular. The development of this field of study has been little short of epoch making, so that it seems timely to begin to apply some of the newer knowledge to the investigation of problems in nutrition.

The idea that proteins of different origin may possess an unlike physiological value is not entirely new. Gelatin, for example, has long been pointed out as an illustration of an inadequate protein. It has been impossible experimentally to sustain life with a diet in which gelatin formed the sole source of nitrogenous intake. To-day one can cite other illustrations of proteins, *e. g.*, zein, gliadin, hordein, casein, which lack some of the characteristic amino-acid complexes readily obtainable from other albuminous materials which are vaguely regarded as "complete." In still other cases, *e. g.*, edestin and glutenin,