SECTION II (ANTHROPOLOGY)

(Report from C. H. Danforth)

Section II held sessions on Monday. The early occurrences of man in America and the archeology of the Mississippi Valley were the two outstanding subjects discussed. The opinion seems to be gaining ground that man and mammoth existed contemporaneously on the American continent; but granting this (which many students are reluctant to do), the question still remains as to whether man appeared earlier, or certain extinct mammals persisted longer, than has heretofore been supposed. P. E. Cox, state archaeologist of Tennessee, argued that man in America has an antiquity comparable to that of early man in other parts of the world. Harold J. Cook, of the Colorado Museum, discussed the paleontology of Colorado, Oklahoma and Texas in relation to human finds in this region, particularly the "Folsom man." E. B. Renaud, of the University of Denver, reported on the prehistoric culture of these people. Cook emphasized the association in this region of human bones with those of extinct forms of bison, mammoth, etc., in formations where recent species other than man are not represented. Suggestion of a possibly late persistence of the mammoth was found by William D. Strong, of Nebraska, in an interesting series of Algonkian myths whose source would be difficult to explain except on the basis of an original first-hand knowledge of living proboscidsians.

A discussion of the present status of the Nebraska Indians and a tentative outline of the archeology of Iowa with many illuminating data on the history and geography of the state were presented, respectively, by A. E. Sheldon, of the Nebraska Historical Society, and Charles R. Keyes, of the Iowa Archeological Survey. An interesting contribution to physical anthropology was contained in a paper by George D. Williams, of Washington University, who finds that, irrespective of total stature or length of tibia, the fleshy belly of the gastrocnemius is shorter in proportion to total muscle length in the Negro than in the white subject.

There was a joint session with the National Research Council's committee on state archeological surveys, at which Carl E. Guthe presided. Dr. Guthe laid stress on the extent of unwitting vandalism and irreparable loss to science occasioned by uninformed amateur collectors, especially curio seekers. Bones and artifacts are practically valueless in the absence of the fullest possible information as to source and associations. These most important data are the very ones which are most often lost or rendered equivocal by the amateur and the poorly equipped museum. It behooves anthropology vigorously to discourage curio seeking, to promote a better appreciation of what facts are important and to strive for the type of cooperation between professional and amateur that has proved so mutually helpful, for example, in ornithology and in astronomy. In the vice-presidential address Dr. Fay-Cooper Cole stressed the importance of the anthropological view-point in the treatment of Indians, immigrants and dependent peoples generally. Examples from the experience of Dutch, English and other colonial powers were cited to show the excellent results that have commonly followed study of and concessions to native religions and customs as contrasted with the almost invariably disastrous outcome when these considerations have been ignored.

SECTION I (PSYCHOLOGY)

(Report from John E. Anderson)

The Des Moines program of Section I was the most extensive one ever arranged by the section, due in part to the fact that, owing to the holding of the Ninth International Congress of Psychology in September, no meeting of the American Psychological Association was held this year. On Friday morning there was a joint session with Section Q, devoted to invitation papers. George D. Stoddard, of the University of Iowa, discussed the objectives of research in child development, with many illustrations from the experimental literature; M. E. Haggerty, of the University of Minnesota, described the methods and progress of his extensive historical analysis of the literature on learning, and Frank N. Freeman, of the University of Chicago, presented the results of his important study on the resemblance of twins. On Friday afternoon a second joint session was held with Section Q for the presentation of the vice-presidential addresses. Howard C. Warren, of Princeton University, retiring vice-president for Section I, spoke on "The Organic World and the Causal Principle," giving a scholarly and constructive analysis of the relation between the doctrine of emergent evolution and the mechanistic interpretation of the universe. Truman Lee Kelley, of Stanford University, retiring vice-president for Section Q, spoke on "The Scientific versus the Philosophical Approach to the Novel Problem," bringing into clear relief the characteristic features and results of the two methods of approach. During the remainder of Friday afternoon and on Saturday five sessions were held for contributed
papers, of which thirty were read. Four of these were in the field of general psychology, seven in experimental psychology, six in genetic psychology, seven in educational psychology and the remaining six may be classified as miscellaneous. The attendance at all sessions was unusually good, varying from 70 for the smallest session to 250 for the session at which the vice-presidential addresses were given.

SECTION K (SOCIAL AND ECONOMIC SCIENCES)

(Report from Charles F. Roos)

Sections K and M (Engineering) held a symposium on the relations of the social sciences and statistics to engineering, with invitation addresses. In a paper on “The Placement of Engineering Graduates before and after Graduation,” John R. Bangs, Jr., of Cornell University, contradicted the somewhat current opinion that the engineering profession is slightly overcrowded. Professor Bangs proposed that engineering schools have a personnel officer who should obtain careful character and vocational analyses from many acquaintances of each student and from these prepare a rating for industrial organizations and for helping the student in picking the right kind of a position. He questioned the ethics of a minority of industrial concerns which try to force students into hurried decisions. In 1928 nearly five times as many positions were offered as there were men in the mechanical engineering graduating class of Cornell University, and the majority of starting salaries were in the neighborhood of $150 per month. During the last three years average starting salaries have increased about $2 per month per year. The old method of determining stresses and strains by picturing material as a continuous, homogeneous, isotropic substance, capable of being subdivided indefinitely without losing any properties exhibited in the bulk, is erroneous, according to F. B. Seely, of the University of Illinois, who read a paper on “The Statistical Element in the Mechanics of Materials.” Experiments involving repeated stresses (fatigue of metals) and studies of the internal character of metals made possible by the use of the metallurgical microscope have produced considerable modification in our conception of materials, and material is now pictured as an aggregate of structural units varying as to size and shape, disposed at random orientation and containing internal discontinuities such as minute cracks and inclusions which are also distributed according to the laws of chance. For such a conception the problem of determining stresses is one where exact calculations can have no place, but occurrences are governed by probabilities and are susceptible to statistical analysis. In his paper on “Economic Quality Control of the Manufactured Article,” W. A. Shewhart, of the Bell Telephone Laboratories, said that the aim in manufacturing is no longer to do exactly what we want to do, but to approach what we desire within certain limits. This revision in ideas brings with it a modification of methods of controlling quality all the way from the raw material to the finished product. By the use of probability and statistical theories it is now possible to control quality within limits and to obtain more economically a product which does not vary more than a specified amount which may be left to chance. Dr. Shewhart exhibited charts to show that his method actually works in the manufacturing of telephones and other equipment used by the telephone companies. Harold Hotelling, of Stanford University, gave a paper entitled “The Economics of Exhaustible Assets.”

In his vice-presidential address on “The Future of Retirement Schemes for Superannuated Employees,” H. L. Rietz, of the University of Iowa, took and defended the position that both the employer in industry and the public, as an employer for the public service, should clearly recognize retirement allowances as sound business and not as acts of charity. He predicted that there will gradually be a more and more pronounced drift towards retirement plans of the reserve, contractual type, operated by organizations as permanent and trustworthy as legal reserve life insurance companies and subject to state supervision similar to that exercised over life insurance companies. The remainder of the Monday program was devoted to invited and contributed papers by E. B. Reuter, G. D. Stoddard, C. I. Bray, E. D. Starbuck, W. G. Bergman, C. F. Roos and J. E. Brindley. Tuesday morning was devoted to a joint program with Section A (Mathematics) and the American Mathematical Society, the program consisting of papers by Henry Schultz, H. L. Rietz, H. Hotelling, G. R. Davies, P. R. Rider and H. A. Meyer. In an invited paper on “The Standard Error of a Forecast from a Curve,” Henry Schultz, of the University of Chicago, employed a formula due to Gauss but the importance of which appears not to have been recognized before, and showed that forecasts of the population of the United States are subject to much larger “probable errors” than statisticians have generally supposed. Professor Schultz showed that, assuming that the well-known Pearl-Reed population curve is the proper one to use in estimating our future population, the chances are even that the actual population in the year 2100 will differ by more than ten and a
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