

algebraic count of intersections in one special case to get the number of fixed points, algebraically taken. Lefschetz's well-known theorems on intersections, coincidences and fixed points describe situations belonging to this general category, of which various important special cases were previously well understood. The Appendix B by P. A. Smith with which Lefschetz's book closes is devoted to a study of the "Fixed Points of Periodic Transformations," a subject still closer to the dynamical applications. Similarly, the last chapter of Whyburn's book is entitled "Periodicity. Fixed Points," and references to the dynamical origins of this type of question are there made. Here Whyburn presents interesting work due in part to Kerékjártó, to Ayres, to Montgomery and to himself.

In this way one receives a concluding tacit suggestion in both cases that the abstract phase in the development of algebraic and analytic topology is about to pass into a second phase, less abstract and closer to basic dynamical ideas.

The significance of this rich mathematical source was realized first by Poincaré, who in the third volume of his celebrated "Méthodes nouvelles de la Mécanique Céleste" found it necessary to analyze the connectivity of certain manifolds of states of motion, to consider transformations and fixed point theorems and to evolve the concept of dynamical "probability." In fact it seems that *all* topological questions are presented naturally in purely dynamical contexts. Certainly there are numerous fascinating and important questions of this sort as yet unanswered. For example, questions concerning measure-preserv-

ing transformation (like rotations which preserve areas or volumes) are essentially topological in character, since these are the transformations which can not take any continua or set of continua into a part of themselves. As yet such "conservative" transformations have been little studied, although recently Oxtoby and Ulam have treated them to great advantage.

It seems to be regrettable that up to the present time so little has been accomplished by the topologists that is directly serviceable for application in the dynamical field. Since I have long worked in theoretical dynamics, on the borderland of and in what is essentially pure topology, I may be allowed to testify to this fact. More than any one else, it has been Marston Morse (see his Colloquium volume, "The Calculus of Variations in the Large," 1932) who has shown algebraic topology at work in the applications, through his notable "critical point relations." Likewise, as stated above, the upper semi-continuous collections of Moore in analytic topology have turned out to be valuable for the understanding of certain dynamical situations.

If further development in the direction of the applications continues, topology will indeed greatly increase in scope and significance. In any case, mathematicians generally will rely upon the books of Lefschetz and Whyburn, as representing the present high-water mark of topological development, and as furnishing first-hand and notable accounts of two basic aspects of abstract topology.

GEORGE D. BIRKHOFF

HARVARD UNIVERSITY

## SOCIETIES AND MEETINGS

### CENTENARY OF THE AMERICAN ETHNOLOGICAL SOCIETY

THE centenary celebration of the American Ethnological Society, held on November 14, marked the founding of the oldest anthropological, and one of the oldest scientific, associations in the United States.

The society was founded in November, 1842, by Albert Gallatin, Secretary of the Treasury under Thomas Jefferson. Its headquarters have always been in New York, and it is now affiliated with the New York Academy of Sciences and the American Anthropological Association. The American Museum of Natural History in New York has consistently cooperated with the society. In 1943, the first year of the newly organized Inter-American Society for Anthropology and Geography, the society will likewise act as an affiliate and council member of that group. Membership is at present largest for the United States, but likewise includes individuals from Mexico,

Central and South America and, until December 7, 1941, from Europe, India and the South Seas. It is noteworthy that a few English members still keep their accounts active.

The celebration was originally planned to cover at least two days and to include speakers from the country as a whole, but, at the request of the Office of Defense Transportation, it was telescoped into a single meeting terminated by a dinner, and its roster of speakers was limited to the eastern seaboard from Boston to Washington.

The afternoon meeting, held at the American Museum of Natural History, consisted of three sessions on the general topic of acculturation or culture-contact, oriented toward administration. One session was devoted to each of three geographical areas: Oceania, Latin America and North America. The speakers were Ruth F. Benedict, Raymond Kennedy, Clyde Kluckhohn, Ralph Linton, Margaret Mead and

Julian H. Steward. Discussants were A. Irving Halliwell, E. Adamson Hoebel, Frank Tannenbaum, George C. Vaillant, John Whiting and A. K. Widjoatmodjo. The chairman was Wm. Duncan Strong, director of the Ethnogeographic Board. The papers will be published in full in the *American Anthropologist*.

At its centenary the American Ethnological Society passed the following resolution:

*Be it resolved:* that the American Ethnological Society, for 100 years dedicated to the study of peoples not belonging to Western Civilization, express upon the occasion of its centenary celebration its profound conviction that racial persecution and discrimination can not be scientifically justified. We protest the distortion of anthropology which falsely assigns inborn superiority to some one "race" and assigns others to inborn inferiority. Ethnological studies rouse enthusiasms for the inventions and social life of many peoples of all races and make it im-

possible to assent to the dogma that civilization depends upon the enslavement of one race by another.

The society was greatly honored at its centenary dinner by the presence of Albert Gallatin, great-grandson of its founder. The president, Harry Shapiro, presided. Albert Gallatin had also been instrumental in the establishment of New York University, and a congratulatory letter was read from the present chancellor of the university, Harry Washburn Chase. The society was also extremely fortunate in having as dinner speakers Clark Wissler, who served many years as secretary, president and director, and Franz Boas, who has been editor of the society's most important publication series since 1906, and to whom the society is indebted for its present organization along scientific lines.

MARIAN W. SMITH,  
*Secretary*

COLUMBIA UNIVERSITY

## REPORTS

### ANNUAL REPORT OF DR. JESSUP, PRESIDENT OF THE CARNEGIE CORPORATION

DR. WALTER A. JESSUP, in his first annual report as president of the Carnegie Corporation of New York, announces that during the year 1941-42 grants totaling \$2,831,650 were voted by the trustees "for the advancement and diffusion of knowledge." Of this sum, \$533,565 was given for activities directly related to the war. The largest new grant made for war purposes, \$100,000, has enabled the Joint Army and Navy Committee on Welfare and Recreation to conduct a variety of experimental programs as a basis for the activities of the Special Service Division of the War Department. Allocations amounting to \$12,500 to the American Council on Education were made to keep colleges and universities informed of the personnel needs of defense agencies and, conversely, to inform these agencies of the manpower resources of educational institutions. Grants of \$75,000 and \$50,000 were also made to the Red Cross and the United Service Organizations, respectively, in support of their emergency activities.

President Jessup contrasts the present program of the corporation with that carried on during World War I:

The first World War came at a time when the Carnegie Corporation was hardly more than an institutionalized extension of Mr. Carnegie's personal philanthropy. Its administrative machinery was new and its program still in the making. Its direct contribution to that first great national crisis of the twentieth century took the form of generous gifts to outstanding private agencies which had undertaken to supply the amenities of life to men in the

army camps. Appropriations to other Carnegie enterprises more actively concerned in the war effort and to the National Research Council were also voted in recognition of emergency responsibilities beyond their normal resources.

The present picture differs in many essential respects from that earlier one. In the first place, the Corporation in the period since 1918 has granted \$140,800,000 to various agencies and institutions which share its concern for the advancement and diffusion of knowledge. Many of these agencies and institutions are now in a position to render direct and useful services to the Government. Secondly, the public has been educated to support the social service agencies which were the chief recipients of the grants made in 1917 and 1918, and they no longer look to the foundations for any substantial portion of their operating income. Finally, the very business of making war has changed. War now involves not only the professional soldier and the professional diplomat, but the scholar, the technician, the scientist, and the administrator as well. Success in modern war requires mobilization of all the nation's intelligence. In this kind of war, the foundation, which in the course of its normal peacetime activities has enjoyed peculiarly close relations with scientists and scholars, can play a useful role within the terms of established policies.

It has been interesting and on the whole encouraging to discover that by and large the research agencies and the professional associations which had come of age before the present war and with which the corporation has long cooperated are making substantial contributions to the war effort.

### UNIVERSITY AND COLLEGE GRANTS

Over a period of years, the corporation has contributed substantial sums for the development of