The survival and the strength of American democracy are proof that it has succeeded by its deeds thus far. But we all know it contains the seeds of failure. I for one will not be confident of the continued survival of American democracy if millions of unskilled workers and their families are condemned to be reliefers all their lives, with no place in our industrial system. I will not be confident of the survival of democracy if economic crises every few years continue to put fear into the hearts of millions of skilled and professional workers. I will not be confident of the survival of democracy if half our people must continue to be below the line of decent nutrition, while only one tenth succeed in reaching really good nutritional standards. I will not be confident of the survival of democracy if most of our children, which means most of our future citizens, continue to be reared in surroundings where poverty is highest and education is lowest.

These are the conditions that made possible what we are now witnessing in certain large areas of the world. They are the seeds of danger to democracy. Given a healthy, vigorous, educated people, dignified by work, sharing the resources of a rich country and sure that their political and economic system is amply meeting their needs—given this, I think we can laugh at any threat to American democracy. But democracy must continue to deliver the goods.

And so, let us dedicate ourselves anew to our democratic body of faith—to the promotion of a stable but ascending general welfare by increasing the productivity of the people and by adopting price, wage and other policies which distribute income more evenly among the people but which do not diminish the incentive to increased production of needed goods. Let us dedicate ourselves anew to the belief that there are extraordinary possibilities in both man and nature which have not yet been realized, and which can be made manifest only if the individualistic yet cooperative genius of democratic institutions is preserved. Let us dedicate ourselves anew to making it possible for those who are gifted in art, science and religion to approach the unknown with true reverence, and not under the compulsion of producing immediate results for the glorification of one man, one group, one race or one nation.

Are we as scientists doing all we can to make democracy succeed? Are we using our science vigorously and impartially, to bring greatly increased health, wealth, security and education to all the people of the United States? The fate of democracy and of scientific freedom will depend less on what we may say than on how unreservedly we dedicate ourselves to these deeds.

OBITUARY

THOMAS WINGATE TODD

January 15, 1885—December 28, 1938

IN 1937 there appeared a volume which expressed its purpose "to promote the welfare of the child in the interest of the Nation to the end that physical and mental health, in their fullness, may be added to the ideals of Loyalty, Honor and Service." The book so dedicated, the first of a series, was the "Atlas of Skeletal Maturation (Hand)," by T. Wingate Todd and his associates. In inscription the volume epitomized goal, and in content exemplified a scientific approach. It marked a milestone in bringing human anatomy from the study of charnel house material to the study of the living population.

Trained in the Hunterian tradition that an anatomist must know vertebrate and mammalian as well as human morphology, Dr. Todd was grounded in the comparative approach. To this was added the Egyptology of Sir Grafton Eliott Smith and the human paleontology of Sir Arthur Keith. With this background Dr. Todd built at Western Reserve University a laboratory of anatomy unique in the world: 3,000 skulls and skeletons of the Mammalia; 600 skulls and skeletons of anthropoids; 3,300 human skulls and skeletons, for each of which sex, age and stock (race) was known, and for each of which literally hundreds of anthropometric measurements were available. It was from this comparative and human material that Dr. Todd drew for his many contributions.

Physical anthropology owes to him the insistence that the study of man's body be based on carefully documented material and that it must turn from static problems of evolutionary stage to the dynamic march of unfolding pattern. From the skeletal material he learned those age criteria later to be applied to growth studies: appearance of centers of ossification, calcification of the teeth, union of epiphyses, age-changes in the pubic symphysis and on the articular ends of long bones, suture-closure and age-changes in vascularity and texture, particularly of the flat bones of the skeleton. The measurement of the human body was clarified by his studies of the reliability of locating bony landmarks as related to subcutaneous tissue thickness. He made possible a more accurate transition from craniometry to cephalometry, from osteometry to somatometry: measurement of the dead was for him valid only in so far as it contributed to a more precise measurement of the living.

Human anatomy was to Dr. Todd *living anatomy.* In pursuance of this theme he taught his first- and

second-year students gastric function and joint movement via fluoroscopy. A number of papers on the gastro-intestinal tract were published over a period of years. As a distinctly anatomical contribution Dr. Todd edited the chapter on the respiratory system in "Cunningham's Anatomy." At the time of his death he was preparing a volume on clinical anatomy.

With the establishment of the Brush Foundation, in 1928, Dr. Todd, as chairman, began an intensive and extensive study of growth in children. He was concerned not only with the anthropometry of growth, but with maturation—not alone growing, but growing *up* was the theme of his study. Thus it was that his research program embraced the range of physical and psychological investigation: progress in physical maturity and the analysis of increase in size and change in proportion; gain in weight and its relation to the maturation pattern; dento-facial development; brain potentials and muscle action currents; psychomotor development and the unfolding skills; steadiness, dexterity and eye-hand coordination; mental expansion and intellectual and social adjustment; interests, talents and vocational aptitudes; the development of emotional stability and personality traits. Reports treating of these many phases may be found in the Conference on Physical and Mental Growth in the Adolescent, Cleveland, 1930; Part II of the White House Conference on Growth and Development of the Child, 1933; "Atlas of Skeletal Maturation," 1937; and numerous shorter publications.

In recognition of his multifarious interests Dr. Todd served American science in many capacities: associate editor, *American Journal of Physical Anthropology, Child Development, Growth;* vice-president, American Association of Anatomists, 1920–21, 1938–39; vice-president and chairman of Section H, American Association for the Advancement of Science, 1922, 1933; president, American Association of Physical Anthropologists, 1938–39; member, White House Conference on Child Growth and Development, 1929–31. He was honored by membership in the leading anatomical and anthropological societies in the United States, as well as in honorary and scientific fraternities; he held membership in the Société d'Anthropologie de Paris, the Académie Royale de Médecine, Belgium, the Royal Anthropological Institute of Great Britain and the Zoological Society of London. As a civic leader in Cleveland he maintained active membership in many organizations for the promotion of community culture and welfare.

On December 15, 1937, Dr. Todd celebrated his silver anniversary as Henry Willson Payne professor of anatomy at Western Reserve University. It was destined that only one more year was to be added to this quarter-century of achievement, but so productive was he that to him scarcely applied the lines of Keats: "When I have fears that I shall cease to be ere my pen has plucked my teeming brain." Over 250 publications attest to his industry. He was a clear, forceful writer, given to almost lyrical passages; he wrote so that without sacrifice of scientific accuracy he might explain and interpret to the layman. His public addresses were punctuated with humor and adorned with apt phraseology. Seldom have scientist and layman enjoyed a more complete meeting of minds.

American anatomy and physical anthropology have lost a dynamic and far-thinking leader, but they have gained a vision of *living* man as the proper study of man. Generations to come will have life more abundantly for his work. Those of us who knew him and loved him have lost a teacher, colleague and friend.

WILTON MARION KROGMAN
UNIVERSITY OF CHICAGO

RECENT DEATHS AND MEMORIALS

DR. J. PLAYFAIR MCMURRICH, professor emeritus of anatomy at the University of Toronto, died on February 9 at the age of seventy-nine years.

DR. WILLIAM C. KENDALL, who retired in 1932 as aquatic biologist in the laboratory of the U. S. Bureau of Fisheries, died on January 28 at the age of seventy-eight years.

DR. CHESTER DALE CHRISTIE, assistant professor of chemical medicine at Western Reserve University, died on January 27 at the age of fifty-two years.

DR. A. W. PORTER, since 1928 emeritus professor of physics in the University of London, died on January 11. He was a founder member of the Faraday Society and was president of the society from 1920 to 1922.

DR. CHARLES JOSEPH GAHAN, from 1913 to 1927 keeper of the department of entomology of the British Museum (Natural History), died on January 21. He was seventy-seven years old.

PROFESSOR HENRY BALFOUR, curator since 1891 of Pitt Rivers Museum of the University of Oxford, died on February 9 at the age of seventy-five years. Dr. Balfour was a former president of the Royal Geographical Society. He had been a member of the Council of the Anthropological Institute of Great Britain since 1891 and was president of the institute in 1903–04. In 1904 and again in 1929 Dr. Balfour was president of the anthropological section of the British Association for the Advancement of Science.

DR. H. H. WOOLLARD, professor of anatomy in University College, London, died on January 18 at the age of forty-nine years.

THE ninety-second birthday on February 11 of Thomas Alva Edison was observed at the Franklin Institute, Philadelphia, by the opening of several spe-